



THE LIBRARY
OF
THE UNIVERSITY
OF CALIFORNIA
LOS ANGELES





Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

THE LEVEL OF SOCIAL MOTION



THE LEVEL OF SOCIAL MOTION

AN INQUIRY INTO THE FUTURE
CONDITIONS OF HUMAN SOCIETY

BY

MICHAEL A. LANE

AUTHOR OF "GREAT PHILOSOPHERS"

New York

THE MACMILLAN COMPANY

LONDON: MACMILLAN & CO., LTD.

1902

All rights reserved

COPYRIGHT, 1902,
By THE MACMILLAN COMPANY.

Set up and electrotyped March, 1902.

Norwood Press
J. S. Cushing & Co. — Berwick & Smith
Norwood Mass. U.S.A.

HM
101
L242 l

PREFACE

THE pages of this book are addressed to the man and to the woman of average education. I have followed this plan in view of the fact that the average man and woman of culture in the present time know more about social growth, and social life in general, than did the "learned" philosophers of any other age in the history of the human intellect. The time has long since passed when science can belong to the few, and the sooner this fact becomes impressed upon the minds of the men who dig in the laboratories the better it will be for the progress of science at large.

By way of preface I have little to say except to indicate the character of the work I have attempted to do. This book is the fruit of many years of investigation into the phenomena of human society and into the causes of social action in general. My purpose has been to discover a law of social motion which shall harmonize the bewildering facts of human history; account for the apparently inconceivable contradictions between human aspirations and human injustice; and foreshadow the future of human society in its moral, intellectual, and economic forms. It appears that I have discovered a law of this kind, and I submit the result of my labors to the general public, and at the same time to the scientific world, in

1500127

the belief that my theory will find capable critics on either hand. The most I can do in this preface is to state in the most general way the main conclusions flowing from the law of social motion developed in this book. These conclusions are as follow :—

Human society is rapidly moving toward a state of equality very similar in all essentials to that which is advocated by socialist philosophers as the ideal of a genuinely Christian life. The forces drawing the human race to this remarkable end are the very forces by which human history has been thus far wrought out. They are the same forces described by Darwin in his law of natural selection.

Accompanying this drift to economic equality will be found several facts of the highest importance in the social evolution of man.

The brain of civilized woman is increasing in weight. Her intellect is rapidly developing a new and extraordinary capacity, and the ultimate end of this progress in woman will be a social state in which men and women will be intellectually equal, or nearly so.

. The human population of the earth is moving with accelerating force toward a mean, or normal number which, when once reached, can never again be disturbed.

The social conditions upon which this twofold equilibrium will rest—the equilibrium of economic equality and that of a stable number of population—are reacting now, and will react in the future upon the so-called inferior races. It would appear that through the force of progress itself these races must be totally eliminated from the earth. Their elimination will not be accomplished by war or by pestilence; but by

the general diffusion of wealth and education which the march of progress demands. The elimination is now going on and is rapidly wiping out more than one race of these inferior men.

These are the principal conclusions flowing from the law I have attempted to demonstrate in this volume. There are many other conclusions having to do with the moral, intellectual, and æsthetic progress of the human family, but for light upon these I must refer the reader to the book itself.

M. A. L.

OCTOBER, 1901.



CONTENTS

CHAPTER	PAGE
I. THE FLOW OF MORAL ENERGY	I
II. BASIC FORCES AND FUNCTIONS	33
III. ORGANISM AND ENVIRONMENT	84
IV. ORGANISM AND ENVIRONMENT CONTINUED . .	124
V. THE INCREMENT OF PSYCHIC CAPACITY . .	159
VI. THE INCREMENT AND THE SOCIAL SCALE . .	188
VII. SOCIAL KINETICS	237
VIII. SOCIAL KINETICS CONTINUED	286
IX. THE LAW OF CAPITALIZATION	331
X. METHODS OF COMMUNICATION	417
XI. SOCIAL EQUILIBRIUM	470
XII. MORAL EQUILIBRIUM AND CONCLUSION . .	525



THE LEVEL OF SOCIAL MOTION

CHAPTER I

THE FLOW OF MORAL ENERGY

IT is a wholesome practice to review, now and then, the progress that has been made by the human intellect. The intelligent man of to-day smiles at the beliefs of his forefathers, while the sympathetic man shudders at their cruelties. In the opinions of modern people the ancient world was an incomprehensible compound of ignorance, pain, and depravity.

The ancients did not understand their own nature or the nature of the things around them. They talked much and did little. They guessed about everything, and they knew nothing. The less they were able to comprehend, the more satisfied they seemed to be with their own notions about the causes and the purpose of the visible and the invisible world.

All this, however, has been changed. The character of human thought seems to have undergone a right-about reversal. The wise men of the present time are those who decline to venture a guess about anything — particularly about the cause of universal existence, a subject upon which the ancients were ever ready with an opinion and a theory. It would seem that, as men grow wise, they grow cautious also ;

that superior knowledge is accompanied by deeper humility ; and that the flame of unbounded faith has been quenched by a desire for rational demonstration.

A comparison of ancient and modern thought will show us how thorough has been this reversal in man's ways of thinking. All of the earliest written records of human life disclose the human intellect attempting to map out the entire scheme of universal creation. Wise men seldom make similar efforts now. Their attention has been turned from the universe, as a whole, to the nature of its smallest particular parts. Instead of trying to explain how the illimitable totality of things sprang into being, they are trying to discover the remote process of life in the remote interior of the microscopic cell.

In the development of this inversion of intellect many old beliefs have been annihilated and many ancient errors removed ; and chief among the changes thus brought about are those which concern the history of man himself and of the nations of which that history is the record.

Intelligent and sympathetic men listen with delight to the story of the ages. They never tire of hearing that universal epic which has for its episodes the rise and fall of races, the exploits of nations, and the successive revolutions in the intellect of mankind. Yet he who would account for the facts of human history by rational methods must approach his subject cautiously, lest perchance a too literal presentation of fact be received with incredulity, or perhaps resentment. Repugnance to being told that their intimate beliefs are false is a common character of men in all ages and in all places.

This truth is perfectly plain. But it is not so plain that the intensity of such repugnance is measured by the fallaciousness of the beliefs themselves. In a civilized state we may with safety deny the existence of witchcraft; but to do so in a tribe of Central African savages would be hazardous, if not fatal. On the other hand, men have suffered extreme penalties in Europe for denying that the earth is flat; whereas to-day such denial would rouse the anger of men nowhere in all Christendom.

If, therefore, the philosophic historian would present a theory of human conduct conflicting with popular notions of truth, he must be prepared for criticism the reverse of kind, and for an acceptance which, if it is to be general, must be slowly and painfully won.

But this is not all; he is met with a more discouraging prospect still. He is by no means assured of a welcome reception, even at the hands of the few whose lives are devoted to the discovery of new truths and to the incidental destruction of old errors. For even these suffer from that common human character already described. They, too, have beliefs; and if not beliefs, they have theories, of which they leave go with reluctance, even in the face of what seems to be the extreme of probability.

It is the purpose of the author of this book to lay before the minds of thinking people a new conception of social progress and a new theory of human history. He realizes the extraordinary difficulty of the task,—difficulty not only in the arrangement of the facts to be considered, but in the logical application of his theory to universal history. That he is not too pre-

sumptuous he hopes will be made clear in the sequel. But the undertaking, presumptuous as it may be, will have been more than justified if his theory wins a hearing in the courts of scientific judgment and challenges attention in the forum of public thought.

The vast and intricate structure of human knowledge we now possess has arisen by slow and almost imperceptible growth from very simple beginnings. Every new idea, every fresh demonstration of experience rests solidly upon an underlying fact or demonstration, fixed in its place by the hands of patient toilers who knew not that they were merely preparing the way for builders who were to come after them. Many of the great blocks which form the body of the structure were imperfectly hewn and unskilfully placed at the first attempt, and it has been necessary often to tear down and build anew. But in spite of these delays and these corrections, the structure has arisen with lofty and grand, though slowly wrought, proportions, and from the rubble of time we have reared up great walls and fair outlines giving promise of future beauty, strength, and durability.

But while this is true, we may be none the less assured that human knowledge, when complete as man can make it, will present a structure of vastly different character from that which we now see. In looking back upon the past we observe that science has been enlarging its domains simultaneously in all directions. Human curiosity, feeding itself upon material within easy reach, has developed first in the direction of physical and biological fact. In the infancy of rational speculation, general causes were

assigned to the procession of phenomena in the outward world, and men believed that the easiest solutions of natural mysteries were the true ones. With the advance of modern science and its methods these old beliefs fell away, to be replaced by demonstrable theories based upon the simple perceptions of common experience. Matter was weighed and analyzed, instruments were invented to insure the accuracy of the measurements, and experiments were made to test the truth of the observations taken.

In this way, the knowledge of nature we now have has been won by the patient effort and thought of a few men who have unselfishly labored to gain the priceless wealth of truth only to divide it freely among their fellows.

The method of science is no more or less than the application upon a large scale of the simple way of procedure followed by a savage who carefully tracks his game through the tangle of a forest; and the motive which impels men to the highest achievements of scientific inquiry is only a refinement of that simple curiosity which animates the same savage to discover the cause of a mysterious sound, or to render to himself a satisfactory reason for the motion of the stars, or the movements of air currents.

There is a noble as well as a vulgar curiosity, although the motive in the two characters of mind is one and the same. The astronomer who watched the planets for thirty years to discover the law of their motion was moved by impulses precisely similar, in their nature, to those of a child who pulls apart a mechanism devised with much labor and ingenuity by his elders. The most admirable achievements of

the scientific mind are those which have been attained without the slightest view to utility.

As long ago as the time of John Locke, and possibly of Thomas Hobbes, the philosophers of Europe had turned their attention from merely metaphysical subjects to an examination of the human mind by the use of the very methods which their contemporaries were then applying to chemistry, physics, and physiology. With the publication of Hobbes's "Leviathan" began the disintegration of the old mental philosophy, and to-day the science of psychology is approaching an exactness comparable with that of the other sciences which have an assured place in the curriculum of the higher schools. With the dawn of the nineteenth century came the light of another and a new science which has developed with striking rapidity of growth, and which to-day forms the basis of a reconstruction of the entire realm of thought in which human institutions and human progress play the most conspicuous part.

We believe that we are only voicing a general opinion when we say that a rational conception of human history was impossible until the discovery of the law of natural selection by Charles Darwin and Alfred Russell Wallace. And it is only within comparatively recent years that the importance of Darwin's law in all intelligent conceptions of human progress has been appreciated. The mystery of the growth, decay, and death of nations may happily be likened to the mystery of life in general, with its innumerable, varied forms and its apparent lack of order, design, or purpose.

As we glance backward through history we are

confronted with a bewildering array of facts which seem hopelessly inscrutable. We behold the march of the nations pressing forward, now swiftly, now slowly, rushing on precipitously there, pausing here as if stricken powerless by a force unseen and inconceivable. Here we find a people conquering the world, rising to the supremacy of power, and rapidly collapsing and disappearing in a few years. There we find another people which continues to live through the ages unchanged and apparently unchangeable. Now, it is a race of semi-savages overwhelming an old and established civilization, and reducing its superb works to a heap of ruins. Again, it is an ancient civilization defying time and conquest as if by sheer inertia.

Religions, ancient and firm-set, crumble and vanish forever from the face of the earth; while new religions, beginning as a germ in some obscure and remote soil, suddenly acquire tremendous vitality, and oversweep the world with irresistible power. The tide of civilization pours its volume to the west in one age. In another it returns from the west to the east, threatening the life of the people from which it first arose. Ancient forms of government give way to new. Republics arise, to fall, in time, before monarchies. Monarchs and monarchies are brushed away by democracies. In some nations an age of supine credulity and faith makes way soon for an age of scepticism and doubt. Again, we see an age of indifference give place to universal fanaticism.

On the other hand, we observe similar fluxions in the history of intellect. Following fast upon an age of extreme enlightenment, we behold a people

sink to the level of barbarous ignorance. The descendants of a race which reared marvellously beautiful temples, and lived in the refinement of physical luxury, we behold camped in hovels built on the ruins of the palaces of their ancestors. The beggar sits on the empty tomb of the king who ruled his forefathers.

Under and behind this flow and ebb of human affairs is a force which is not understood without some close reflection. The conviction comes home to us that man is *not* the arbiter of his destiny. Institutions change, religions die, races disappear, political faiths weaken and pass away, nations are blotted out, and the great dead appear in the eyes of the living as the things and the actors in a rapidly vanishing dream. Human history is at best an uncertain record, coming to us, as it does, surcharged with the ignorant beliefs and personal prejudices of its authors. The facts, difficult as they would be to understand if they were presented to our inspection as they really took place, are so altered by accident or by intent, that they seem to be wholly inscrutable. Living witnesses there are none; and of inanimate witnesses there are so few as to be next to unavailing. Such seems to be the material with which the philosophic historian has to deal.

But much of the distress which had accompanied the study of history was relieved by the luminous discovery of Charles Darwin, and it is with this discovery in mind that we approach the subject described in the title lines of our work. Our purpose here will not be to discuss those events which usually attract the minds of men who read and write history. Fas-

cinating as these events may be, they are not all-important in the study of social forces and of social progress. The personality of a king may be a curiously interesting subject. The battles won by a great general are stirring objects for the contemplation of him who loves to excite the imagination with romantic narratives. The crimes of a Nero or the follies of a Domitianus or an Elagabalus, the campaigns of an Alexander or of a Napoleon, the pitiable life and doom of a Robespierre, are themes which serve to illustrate the causes of human history, but which are in themselves of no general importance.

One battle is very like another. One great soldier differs from another only in the kind of implements of war he uses or in the general composition of his campaigns. But all have a generic cause and kinship. Caligula and Henry VIII., separated as they were in time, are much the same in character. Abraham Lincoln and Oliver Cromwell, differing as they do in personal attributes, both represent the same underlying principles of human liberty. Much of the ecclesiastical and political history of Europe is a *chronique scandaleuse*, which, interesting as it is by way of diversion, helps us but little to a clear understanding of that general procession of human affairs, the order and the cause of which it is our purpose here to master and to comprehend. To discover the most available material for our investigation, let us turn then, not to ancient times or to the beginnings of human history, as they are found in the savage races occupying the earth before the invention of letters, but to facts to be observed in the present day and in the life of our own civilization.

Within the last quarter of a century there has sprung up in letters a distinct movement, which, for want of a more precise term, has been designated "social philosophy" by those who participate in the discussion as well as by those who constitute themselves its critics. This movement, however, is inadequately described by the adjective "philosophical." It is more than philosophical. Its roots are set in a soil richer and deeper than that of mere knowledge. Its circle is by no means conterminous with a limited coterie of minds. Its influence is felt and understood by men and women who, by no extreme of intellectual courtesy, can be called philosophers. Its purpose is far other than that of bringing together loose ends of thought upon subjects concerned with human society; and indeed many of those who are foremost in the movement would be the first to repudiate the charge that they are concerned with anything even remotely bearing upon intellectual speculation of any kind.

There is yet another name for this new and extraordinary movement—a name which is even more inadequate than that of "social philosophy" because, if anything, it is more misleading. This other name is "sociology." The word was first used definitively by the French philosopher, Auguste Comte, who purposed to create a science having for its material the facts observed in the field of human society—a science which would treat of human affairs as the physical and biological sciences treat of the facts of nature at large.

Following upon Comte, Mr. Herbert Spencer sought to develop the subject in one of the departments of his vast scheme of thought which he has

called "The Synthetic Philosophy." The germ of his system, as he himself informs us, is to be found in his earliest work of importance, "Social Statics." But Mr. Spencer's scheme in general is now so well known that there is no need here to dwell upon it. Suffice it to say that in all respects he has endeavored faithfully to adhere to the plans he outlined for himself at the beginning of that remarkable task which he has so recently finished and given to the world in its completed form.

Two other names should be mentioned as pioneers in this field. The first of these is Adam Ferguson, a Scotch philosopher, who, toward the end of the eighteenth century, in his celebrated "Essay," attempted to lay out a method of treating human history which departed from the old method in that it minimized the importance of those events which had, up to that time, been pressed to the front to the neglect of the larger and more profound movements in the background. Ferguson dimly saw that the real history of the human race did not consist in pedigrees of princes, the dynasties of great nations, the battles of victorious generals, or the intrigues of courts and kings. This rare old Celt was the Bacon of social science, and the time is not far distant when his claims to originality and to genuinely profound perception will be freely acknowledged by all those who desire to see that credit is placed where it properly belongs.

The other man who should not be forgotten in a review of this kind is the unfortunate Henry Thomas Buckle, who died before he could complete the heroic work he had set himself to do. The right spirit per-

vades every line of that really meritorious and stimulating book, "The History of Civilization"; and it is strange that so clear a brain as that possessed by Buckle should have failed to perceive the force of Comte's brilliant suggestion, and to have fallen again and again into the very method he had sought so conscientiously to avoid.

But let us return to the word "sociology" and its history since Comte made it common in France, and Mr. Spencer enlarged upon it in England. The literature which has been written under the title of sociology is almost without an end. If the word means anything it should signify the "science of society." But even those who call themselves sociologists, and who permit others so to designate them, would be more properly described by the term "socionomists," *i.e.* men who *arrange* the materials with which true sociology must deal. If, however, we take the view suggested above, we can clearly understand the widespread misuse of the word and the meaning which is sought to be conveyed by that very misuse. That literary movement called social philosophy by some, and sociology by others, is really an index to the very great changes going on in popular thought—changes to be regarded only as living proof of one important and significant fact—the fact that *human society is rapidly becoming conscious of its own existence.*

Let us pause a moment and consider this matter as one who seeks the cause of a seemingly obscure phenomenon. In the widespread discussions which may or may not find their way into print, but all of which deal directly with what are called "social questions,"

we find two kinds of thought, and two kinds of thinkers. First, there are men whose sole labor consists in an effort to work some change in the morals and institutions of civilized humanity. Secondly, there are men whose efforts are directed toward understanding the meaning of that vast and complicated pageant called social progress. We need not go far to find a name for those of the first kind described. They have been most felicitously called *reformers*. They are everywhere in evidence. They meet us at every turn. They are heard and seen in every quarter, public and private. They pass in one long procession from the throne to the workshop. They are found in the bottom of the mine, in the pulpit, in the professor's chair, in the seat of the legislator and of the judge, at the helm of the journal, in the open streets, and at the handle of the plough. But, wherever found, these individuals all partake of one character. They are all *advocates*. They all demand that some reform shall be made in human affairs, whereby there shall be a more even division of the good things created by human labor; whereby justice will be more efficiently served, and the weak shall be protected from the strong. Most of them have their own programmes whereby these things are to be brought about. Some of them are leaders of great "schools" of reformers with specific plans and elaborate systems of procedure. Others advance some one principle as the supreme recipe for human happiness. Others, again, have no formula for the cure of the ills of the body social, but insist that something must be done if society is not to return to worse than the savage state. And a few

minds — great and imperial minds, too — are satisfied that there is no hope at all for that modern Sisyphus we call Society, whose best efforts can only be rewarded by having the stone of progress roll back upon it, threatening danger and disaster.

This is the picture presented to the eyes of the second kind of men we have described, and these are comparatively few; so few, in fact, as to be almost unknown to the great world in which the debate of reform waxes louder day by day; in which men sweat and toil, and sorrows seem to multiply and pain increase. Distinct is the picture to these observing eyes. They see the struggle, and they hear the noise of the battle and of the debate. Yet it is not in their minds to have sympathy with the toilers or with their friends, the reformers. They do not advocate any plan of relief. They neither hope nor despair. Their only purpose is to *understand*. They desire to know why the great Sisyphus rolls the mighty stone up the hill, and why the stony mass falls back upon him, if fall indeed it does. These latter men, in so far as their work in the world is concerned, have no religion, or morals, or politics, or affections. Let them once know the causes underlying all the complex motions of society; let them master the *law* which moves the mass forward in spite of itself; let them formulate for themselves the necessary action of the forces they see about them, and they will be content.

This attitude toward society is precisely the attitude taken in other departments of science by those whose labor is generally summed up under the head of "scientific knowledge." The man of science has

ever before him but one purpose, and that is the discovery of truth. Sympathy, affection, belief, morality, custom, privilege, happiness, none of these things weigh with that man who would know the facts of nature and the sequence of their occurrence. The true end of pure science is pure knowledge, quite apart from utility or belief of any kind.

This is the position taken by the true sociologists of the present day, but their part in the literary movement we have mentioned should be called the literature of *socionomy* to distinguish it from that of those persons commonly called sociologists, but who bear the same relation to true social science that astrologers bear to astronomy. Setting aside, for the present, the question whether this attitude of sociology be a desirable one or not, let us place ourselves in a position to view the march of human events with the critical eye of an observer and to trace back, if possible, the big results of progress to their roots in the substrata of human impulse and motive.

It is not to be denied that the principal phenomenon of the social life of to-day is that peculiar state of mind ordinarily designated by the term "moral sense." In other words, the chief question in all discussions of social relations is a "moral question." It is a question of *right and wrong*. A reform is urged because, in the opinion of its advocates, the proposed change is right, and the existing condition is wrong. This fact, indeed, is the motive of all changes in the order of human society. The patriot who leads his countrymen in battle against an oppressor encourages his army with the stirring shibboleth,

“ . . . The Right is with us,
God is with the Right, and Victory is with God.”

The labor leader appeals to his fellow-workers by rousing them to a sense of the wrong under which they live. The clergyman strives to impress upon his hearers a sense of their own wrong-doing. Devotion to duty — entirely apart from mere considerations of selfish interest — is rewarded with the highest praise in the power of society to bestow. The political candidate who asks the people for their suffrage urges his claim for that suffrage on a purely moral basis. The party in power has been corrupt; it has been false to its trusts; it has plunged the country into poverty or panic. In short, it has not done *right*. The educator insists that only by a spread of learning can the masses be made secure in that happiness which flows from the administration of an enlightened justice. The economic reformer desires to replace the present *unjust* system of production and distribution with one which, in his opinion, shall restrain the few from robbing the many of the fruits of their toil. Why? For no other reason, he will tell you, than that robbery is *wrong*. In whatever guise it appears the active reform of the present day has no *raison d'être* save alone a moral one.

And surely he would be a bold man who would underestimate the importance of moral force in social development. There is yet to be found a human group which is not altogether swayed by this powerful implement of progress. The savage who cannot count above five is yet not without some crude conception of justice, and in some races of uncivilized

men there is observed a perception of right and wrong so delicate as to be compared with richer and stronger communities in a way distinctly unfavorable to the latter. In our own civilization we find now and then individuals in whom there seems to be totally lacking this characteristically human trait; yet it is to be doubted, if investigation be pushed sufficiently far, that there will be found any sane man who is quite without sympathy, or in whom what is called the moral sense is wholly dead.

We desire at the beginning of our discussion to emphasize this all-important fact: that the most conspicuous relation observable in the drift of modern social reform is inextricably combined with that sense of right and wrong found to be universal with mankind. Let it be remembered, too, that notions of justice become more complex as we ascend in the scale of civilization. The citizen of an enlightened community will condemn with extreme detestation conduct which, in less advanced societies, is regarded with equanimity, if not with approval. Moreover, in any one civilized society, opinions of individuals present numerous varieties which are lacking in backward groups. Thus we find in America and in England that men will dispute as to the morality of conduct about which common opinion in Russia or in Turkey seems to be fixed and determined.

One important and fundamental fact, however, should be pointed out. If mankind is universally possessed of a moral sense, it is none the less true that conceptions of moral value are subject to change both as to time and to place. That is to say, men's opinions of what is right and wrong are subject to

change in common with all the other phenomena of life and of the world at large. This fluent character of moral opinion lies, we are convinced, at the bottom of all the evolution through which human society has passed in historic time and even before it. It is the pivot upon which swing those powerful forces which mould the destinies of nations. It is the starting-point of those revolutions, whether they be rapid or slow, peaceful or violent, which have changed the face of society, and which are changing it to-day. It is moral energy which determines the direction in which social life expands, and it is this energy, flowing on through time, which creates all those reformation with which history has to do, and which take the form, here, of long and bloody wars, and there, of silent and slow growth that gives to a people a moral and political character which varies from age to age.

We have therefore entitled this chapter "The Flow of Moral Energy," and by these terms we mean no more than they themselves imply.

Moral opinions change. What was right yesterday may be wrong to-day. That which was good in one century may be evil in the next. The reformer who is despised now will be deified hereafter. The regicide who is execrated by the people and put to death by the law, is the hero and the martyr of the men and the women of the future. The wretch who dies at the stake for asserting that popular belief is false is the popular liberator in the mind of the age which follows his own.

The stream of moral energy flows down through the centuries, broadening, deepening, and gathering

force as it approaches the time in which we live. The masses of the people, once serfs and slaves, are now the sovereign power. The sceptre lies unclasped upon an empty throne. The slave is dead, and his son is made ruler over the king. Upon the very head of Heresy itself is set the sovereignty of the right of individual judgment.

One by one the wrongs of man have been righted. Moral forces, growing with time, have burst through the mighty dams of oppression which men erected with their own hands. The liberties of one age are the fruits of the moral growth of the ages before it. Small sparks of moral feeling have expanded into vast conflagrations which have swept away the institutions raised by the dull sympathies of the past. During century upon century life and liberty have trodden down the barriers that contained them. Mankind has awakened, age after age, to the consciousness of new and strange suffering. The joy of the past is the sorrow of the present. Onward sweeps the flow. Where will it end?

The civilized man of the present day looks back upon the old kingdoms of the earth and wonders how such an incredible transformation can have taken place. It is a common and erroneous belief that "human nature" can never change. If this were the truth, it would be impossible to conceive of human progress. In the short span of five centuries Europeans have changed in every way save in the general anatomy of their bodies, and it is entirely probable that, in detail, that anatomy has changed too. The modern notion—undefined or vague as it may be—that all men are created equal, would have

seemed a monstrous absurdity to Plato or to Marcus Aurelius. Eight centuries ago the political doctrine of free thought and liberty of religious worship would have been a criminal blasphemy to Europe. To-day it is an organic principle of every enlightened state in the world. One hundred years ago the doctrine that woman should be made the political equal of man was unwritten and unheard of. To-day it is a growing fact of political life in the richest and most powerful nation in human history. Two thousand years ago a state without slavery was a necessary contradiction, an impossibility of thought. From the ideal state which men of to-day create for the future, social inequality of every kind and degree is banished. In the Mosaic code and even in Christian ethics, as we find it in the New Testament, cruelty to dumb animals is undreamed of. To-day it is regarded as an evidence of murderous and criminal predisposition.

Are not these things proofs that "human nature" is not only changeable, but that it has been changed in fact?

The shifting current of moral ideas is evident in every detail of the life of civilized nations. In no department of our national economy is this fact more obtrusive than in the ethics preached from a thousand religious pulpits. Clergymen have abandoned the old appeal to the brutal and selfish interest of the individual. The way to peace lies no longer through fear of hideous torture in an eternal prison, but along the pathway of tenderness, charity, and good will to men. Religious belief is now justified by love of fellow-man rather than by fear of an inconceivable

fire. The very moral attributes with which men have clothed the deity have changed with the flowing opinions of civilization. The mediæval Infinite Tyrant, who frightened the heart of boor and slave, has been replaced with a conception of Infinite Good and unthinkable Love. The God of the serf was a master implacable. The God of the freeman is a father, radiant with ineffable affection and exquisite grace. "The fear of God" has been transformed into "the love of man." The doctrine of total depravity has made way for the more exalted belief that man, in a healthy environment, is inherently good.

If we do not account for this remarkable evolution upon the grounds we have here advanced, to what are we to attribute it? We do not conceive that any sane and cultured man will deny that moral values are subject to the law of transformation which rules the bodies and the minds of human beings in all things else. We must be allowed to assume that the truth is as we have stated. We cannot but reject, as self-evidently absurd, the bizarre idea that men's conceptions of right and wrong are immutable; that moral ideas alone are fixed and rigid, while all other ideas, such as those of art and intellect, are plastic and subject to the law of growth. We do not believe that this doctrine is held by anybody who would gain a hearing in the debate of the world. But if the truth be as we have stated it, somewhat important conclusions must follow. In those conclusions it will appear that the causes of social progress lie remote from the surface of things. It will appear, too, that the method which has thus far been adopted in treating human history is not a safe method. And,

moreover, we are convinced that these conclusions will more than probably demonstrate that current ideas concerning the organic life of nations are based upon false premises; that political science and economics, in their present form, are inadequate to explain the broad facts of social progress; and that ethics, the nascent science which is now drawing to itself the careful scrutiny of scholars, has before it a distinctly open path. Lastly, we are convinced that in the conclusions we hope rationally to draw from our premises, it shall appear that we have discovered a law of social growth which shall unify the two conflicting schools of thought upon social evolution.

Before taking up our inquiry in detail let us here sketch for the benefit of the general reader the twin theories which are now dominant in the world of social philosophy.

Admitted that human society (to use the favorite axiom of Herbert Spencer) is "a growth and not a manufacture," the problem to be solved involves the question whether that growth is determined by the interests of the individual or those of society. That is to say, How far shall the individual serve the purpose of society, and how far shall society leave free the conduct of the individual?

The principles implied in these questions have resolved themselves into two schools of thought—the one which is called individualistic, the other socialistic, the respective cults of which pass current under the names Individualism, or Anarchy; and Socialism, or Collectivism. Under one or the other of these two schools may be classified every opinion concerning the ethics of social life.

It is needful here to call attention to an important distinction. We must not confuse the pure *theory* of individualism or of socialism with the contentions of individualists and socialists for the general adoption of their plans for the public welfare. The individualist accounts for social phenomena by holding that they have been produced by what he calls the process of *individuation*, or of the unfolding of social growth by and through the growth of the individual. The socialist accounts for them by holding that they have been caused by the process of *socialization*, or of the unfolding of individual growth by and through the growth of society.

Holding these views, individualist and socialist go farther and contend that men should act so as not to interfere with these natural processes. If society is furthered by means of individual growth, say the adherents of that theory, society should leave that growth alone. Any interference with *it*, they urge, is an interference with the welfare of the body social. The adherents of the opposite school take the contrary position. It is the growth of society, they claim, that accounts for the enlarging of the life of the individual. The latter, they urge, should not be allowed to interfere with the process which, to their view, is the natural one. These are the twin theories of human society, together with their active propaganda for a method of life which shall most safely conserve the good of all.

Of the individualists, or anarchists, we must give the foremost place to Herbert Spencer. Mr. Spencer, in point of priority in time, and in the vast wisdom and convincing logic he has brought to bear on the

subject, is by far the most profound and capable leader of his school—a school of which he may be said to be the virtual founder. Of the socialists, we are in doubt as to which one of the brilliant philosophers who have expounded it best deserves the first place. The literature of socialism is voluminous, but probably the one work which leads all others as a temperate and scientific effort to prove the socialist position is that of Karl Marx, called in the title “Capital.”

Both schools of thought are rich in logic and notable for the keenness with which they have argued their positions. It is our own conviction that both are equally strong and equally weak. The one weakness common to both lies in the fact that neither seems to have been able to formulate a law of social motion which shall be found to operate everywhere, quite apart from the voluntary efforts of man to control the forces impelling society forward. The literature of socialism is scarcely more than an advocacy of collective, or state, administration and ownership of capital. And as we shall not again have need to consider socialism, as such, in this work, we shall dispose of it here by stating that we regard the movement only as an indication of that moral flux which has been the subject of this first chapter.

How far Mr. Spencer has been able to dissociate from his theory the notion that men can, through their governments, control natural laws, we need but refer to the last chapter but one of the third volume of his “Principles of Sociology.” In that chapter Mr. Spencer adopts an attitude toward socialism which is anything but philosophical. He criticises the movement in a distinctly hostile manner, not as

one who is seeking to account for its existence, but rather as one who is finding fault with it because it is in direct contradiction with his theory. He writes as one who should say: "I have told you how society is growing. You now come upon the scene with your socialism to prove that society is growing in another and an opposite direction. But have a care! If you do not act as I have indicated a naturally developing society *should* act, you will lapse into a state which will be worse for you than that from which you are trying to escape."

And as Mr. Spencer opposes everything that savors of state interference—even, in a way, the police functions of government—we can well imagine his disgust at what he calls a "riot of state ownership."

But if, as it would appear, the drift of society is really toward the socialist state, is not this fact an evidence that *natural evolution* may have something to do with the process? If the progressive tendency of government lies clearly in the direction of enlarged government function, and increasing government interference with industry, is not this of itself sufficient to induce us to inquire into its causes rather than lose our tempers over the existence of the fact itself? The truth is, that since Mr. Spencer first outlined his superb argument for anarchy in "Social Statics," all the enlightened states of the world have become highly socialistic, and have progressed in a direction the very opposite of that laid down as the "natural direction" in Mr. Spencer's first book. Is not this general fact significant? Does it not seem to indicate that universal causes are everywhere producing

similarly universal effects? And is it not good ground for inference that the change in government function is not one toward the total disappearance of that function, but rather toward an enlargement of it in directions which have little to do with the mere policing of the community?

Let us admit, with Mr. Spencer, that the police power of government is tending rapidly toward disappearance. Does this admission necessarily imply the further admission that *all* the functions of government are also disappearing, or that government is not really replacing its police functions with functions of another kind? According to Mr. Spencer's own theory, the militant régime makes way for the industrial régime. This is a structural change in the life-growth of society. But if this be true — and it is — government, so long as it remains, cannot escape the fundamental principle of action. It, too, must pass from the militant to the industrial, and in this very process is seen that "riot of state ownership" about which the great individualist so bitterly and unphilosophically complains.

It is but just that while upon this subject we should make clear the objection which seems to attach itself to Mr. Spencer's position. The critics of his theory of individuation too often fall into the error of losing sight of the important fact that Mr. Spencer's arguments, as an advocate against socialist programmes, are only an outcome of his position as a social philosopher. He has carefully wrought out a theory of social forces which, in itself, is purely scientific. He holds that human society is *in process of evolution* toward a state in which the individual will

be completely adapted to social needs ; one in which each will so conduct himself as to make for the happiness of all ; and one, also, in which that conduct of the individual which shall most facilitate the common good, shall, at the same time, prove to be the function in which the individual shall take most pleasure.

At this conclusion Mr. Spencer arrives by his interpretation of the facts of history and the facts of life in general, as well as those of the universe itself. In this much he is not an advocate in any sense of that word. He has endeavored to understand the direction in which social forces are drifting by an examination of the method in which social forces have acted in the past and are acting in the present. He is convinced that he has found that human progress, political, industrial, and moral, has been brought about by the expansion of individual liberty ; that progress seems to depend upon the subordination of the state to the man, rather than by the reverse process ; and, lastly, that if human society in the future is to be free, rich, and moral, this state can only be brought about by the continuance of that growth which shall leave the conduct of the individual as free and as unhampered as it is possible to be.

It is here — in this necessary and logical conclusion from his premises — that Mr. Spencer finds himself the advocate. If social progress, he argues, has in the past depended upon the increase of individual liberty, it is plain that it must so depend in the future. When, therefore, society attempts to force its growth by methods the contrary of the natural one, that growth must be unhealthy and vicious. If progress

depends upon the widening of individual freedom, restraint of that freedom must be a step backward. Hence, he advises, it is wise to leave the individual alone, and to restrain him in no respect and in no degree save in so far as is necessary to insure an equal freedom to all.

It is this view of social growth which has determined Mr. Spencer's well-known repugnance to state interference of every kind. He is opposed, and logically so, to every form of taxation except that which secures the public peace. He would reduce the activities of government to mere police function, with the belief that, in time, even this slight show of authority will totally disappear. He would gradually eliminate public education, public libraries and hospitals, government bureaus of every kind, and state interference with every sort of business, even with that most vital function of industry which is filled by the mints. Post offices, municipal fire departments, government agencies of all kinds, save that conducted by the police, are clearly obstructions in the way of social progress, according to Mr. Spencer's philosophy. All the functions of the body social, he contends, must be left alone to the free and unhampered action of the private individual.

This advocacy of the illustrious Englishman is based, as we have said, on his theory. A similar advocacy was adopted by Prudhon, but it was grounded upon no such broad and deep observations as those which distinguish Mr. Spencer's profound system of philosophy. When, therefore, we say that Mr. Spencer is virtually the founder of this school, we mean that it was he who first placed the formerly amor-

phous theory of individuation upon the very respectable basis upon which it rests to-day.

The criticism of this theory we have here offered we hope to vindicate in the pages which follow. No advocacy, however warm or well intentioned, can aid us in clearing up the hidden causes of natural phenomena. We must not regard society from the view point of one of its members with a vital interest in its forces. However tempting may be the desire to take part in the reforms going forward, we must restrain these desires from blinding us to an impartial observation of the facts.

Is it true, indeed, that social forces have fashioned the events of history in the way and after the method advanced by the individualistic theory? Is it a fact that social growth has been determined by the ever widening liberties of the individual and by the ever contracting power and function of the state? Is it possible that the increased freedom and happiness of the many have come as an issue not, indeed, of the progressive *restriction* of the power and function of the state, but through their *expansion*? Do the facts of history really coincide with the one view or with the other? How far do they coincide with both, and how are we to ascertain the true nature of the forces which seem to issue in the process of individuation on the one hand, and of socialization on the other?

In the quest of these causes it should be clear that there is great need of utmost caution lest we should allow our sympathies to overrule our judgment. The purpose to be held ever before us can only be defeated by a failure to consider *all* the facts with the same critical eye. We should never lose our equa-

nimity when we come upon a circumstance which does not seem to take its place in our general scheme of thought. We should work upon the phenomena of social life precisely as the astronomer regards the oddly spiral shape of a nebula, as the economist surveys the rise and fall of prices, or as the geologist examines the formations of the earth's crust.

Society is a great moving mass of living matter presenting to our view a bewildering complexity of power and action. This mass of living matter is passing through a fluxion, or change, as complex in its nature as the structure is complex in itself. Human society has come down from the ages through a process of transformation as plainly visible as that transformation through which are passing the general life upon the earth, the earth itself, and the whole contents of universal space.

When we compare the action of human history with other natural processes we are compelled to admit that that action is very rapid. Within the period of four thousand years human society has undergone a transformation of inconceivable vastness. In the society of the present day we can recognize traces of institutions as old, and older, than history, but these are only the vestiges that remain of the scaffolding whereby the present structure was built. In all but a few fundamental respects the general body of society has been profoundly and essentially altered.

Mankind, as a mass, seems to be pressing forward to some ultimate goal in which shall be satisfied that moral sense about which we have written — a sense which is manifestly growing keener and more general with the march of time. There would appear to be

in the minds of civilized men, at least, a consciousness of tasks undone, of virtue unrewarded, of toil uncompensated, of liberty unwon. A conviction that it is not justice but injustice that rules the world is everywhere apparent. To hold that the end has already come, that society is forever to remain burdened with the great load of sorrow under which it staggers, is to hold an opinion unique among thinking people. We all admit that transformation has taken place, that the process is still going on, and that it must continue to go on in the future.

Is there warrant in the facts before us for any conclusion that there *is* an ultimate goal which, when won, will be the entire measure of human purpose? Can a theory be framed which shall rationally account for the seemingly contradictory circumstances of social life, and which shall unify the two opposite theories of social and individual philosophy which have thus far held the foremost places in the general contention? Furthermore, from an examination of the facts of history and the phenomena of the social life of the present, will it be possible to see arise a *law of social action* the operation of which will be found to be everywhere present in all ages and in all peoples, however so widely separated in time, in space, in association, and in kinship of blood?

The author of this book is convinced that he has discovered a law which shall answer these requirements. He does not submit it as an hypothesis to account for facts already accomplished in human history, but rather as a demonstrable process which can be proved in theory once that certain basic, or fundamental, forces are admitted as existing. It is a pro-

cess which has gone on in the past, is going on at the present time, and must continue to operate so long as men live together in associations such as have been known to exist as far back as history or science can definitely carry us.

A law such as this is not necessarily the statement of the manner in which *progress* takes place. Far from it. Progress is only one phase of social action. There is a backward as well as a forward flow of social force; degeneration as well as generation; decline as well as rise. Any generic law of social life must account for both of these phases. In the statement of the formula of the law we must include every conceivable stage of social growth or decay. And, furthermore, the law must not be merely a generalization based upon inductive observation, but must be theoretically applicable to a purely hypothetical society made up of members having essentially the same basic physical and mental characters as men.

As it is upon these basic characters must rest the law of social action we have described, let us now proceed to glance at the nature of these root-forces out of which arise all social organic growths, *human or otherwise*. For it is in these forces, and only in these, can be found any theory or any law of social action which will bear the test of rational criticism or of common sense.

CHAPTER II

BASIC FORCES AND FUNCTIONS

IT would seem to be a self-evident truth that to all action there must be a purpose which is served or an end which is gained. To the ordinary affairs of human life this statement would seem to be especially applicable; and when we consider extraordinary affairs as, for example, the great and stirring events of history, the force of the seeming truth becomes striking in a high degree.

In most of the actions of individual men the purpose, or end in view, is obvious and easy to understand. Men eat to satisfy their hunger; they build houses to protect themselves from the elements; they bathe, and regulate their hours of sleep to secure health and a consciousness of ease; they dress for warmth or for the purpose of conforming with the fashions; they absorb stimulating beverages in order to enjoy the momentary excitation which flows from this habit; they pass about from place to place to encompass the ends of business or recreation; they read books or newspapers to gratify their æsthetic tastes or their natural curiosity.

Turning our attention from individuals to groups of individuals we see the same order of fact. A community constructs a railroad to further the ends

of transportation—to carry men and things about from one place to another. It organizes a system of government to insure peace and to administer the ends of justice. It pays taxes to gather and equip an army which shall protect the common welfare from obtrusive or aggressive communities near-by. The purpose of all these acts seems to be perfectly clear, perfectly intelligible, obvious and easy to the simplest of intellects.

It would seem, too, that this principle is applicable to orders of things other than man and living creatures in general. The comet, drifting from unknown places of nether space, speeds toward the sun as if busily bent upon reaching its destination; the river flows on to the sea, snow and rain fall toward the centre of the earth, and the planets revolve in their orbits with apparently perfect sequence of movement and an apparently well devised plan.

But these movements would appear to differ from those of sentient creatures in that the latter are seen to have some *conscious* purpose; that is to say, their actions are consciously directed toward the ends that are sought; whereas the motions of inanimate things are apparently without this peculiar qualification. And yet if we dive a little more deeply under the surface of things, this difference loses much of its importance. Let us compare the comparatively minute and insignificant actions of an ant with those of a giant world like Saturn, with his rings and his satellites. The purpose of the ant's motions is obvious. But if there is purpose in the actions of the ant why should we deny it to the vast and magnificent order of motion observed in the great luminous-ringed

world of the solar system? We do not know that Saturn is itself imbued with life and sentience such as those possessed by the ant; but would it not be irrational to exclude from the action of the planet a purpose of *some* kind, either to be found in the planet itself, or in some Power by which its mighty mass is held in motion, rhythmic and sure, and when compared with the activities of the ant, endless in time? For, it may be asked, if there be no end of any kind served by the stupendous movements of the planets, why is their action so regular, and why, in fact, are they there at all?

This may seem to be a childish question, but it assumes a tremendous import to man when we turn from the planets and apply the query to man himself. A very little reflection will make this clear. For, if we eliminate the obvious purpose existing in the minds of men for their ordinary, or extraordinary, actions, we are looking at men from that very point of view from which we have been looking at the planets. We know very well why men eat. They eat to satisfy their hunger; and we know that in such satisfaction they indirectly, and, for the most part, unwittingly, sustain life. But eliminate the purpose found in the satisfaction of hunger, and we are reduced to the query, Why do they live at all?

Thus we are brought to the conviction that the word "purpose" is at very best an inadequate one when we attempt to define it by any terms other than the conscious desire of a sentient being to gratify a want. Yet, such a narrow and empty definition of the word would be shocking to the minds of most intelligent persons. Shall we say that there is no higher

purpose, no general and ultimate end served by the existence of the human race, save that to be found in the vulgar wants of the body or even in the higher aspirations of the mind? Is the only purpose and the only end of man's existence that which he can see in the common, or even in the uncommon, motives which animate him and define the bounds of his intent and his activities? Is there, perchance, a purpose for his existence which is not to be found in these obvious actions, these proximate ends, these immediate gratifications? A purpose over and above the wants of the individual and the desires of nations? An end toward which he is drawn as helplessly and as surely as the planet is moved in its course or the stream in its bed onward to the sea?

This is the meaning in which we shall use the word "purpose" here; and if we wrench it somewhat from its narrow sense, we do so only because it would appear that some such process were needed to convey an idea which shall unify natural forces operating in things that live with natural forces at work in what has been called — rightly or wrongly — the "inanimate world."

If we are perfectly honest with ourselves, we will admit that it is vain for the human intellect to try to discern a general purpose, such as we have hinted at above, in the large operations of nature. We know very little about the stars. Millions of suns rush hither and thither through space with no conceivable fixed process of action. Some of them move slowly, some with unthinkable rapidity. If we leave the stars and come to our own solar system, all we can observe is a rhythmic revolution about axis and in

orbit — a revolution in which there is no design perceptible or even conceivable to the human intellect. Upon the earth the same ceaseless activity is everywhere manifest and the same evident lack of purpose. Evaporation, condensation, precipitation, the movements of air currents, electric energy, the flow of the tides, the action of glaciers, fluctuations of the earth's crust, the gravitation of water to the sea — all these things proceed in an order as regular as that which marks the revolution of the planet in its orbit or its rotation about itself. Yet who can answer the simple question of the child who asks, Why?

As we approach our own sentiency, and look about us upon the great tide of life abounding upon the earth, the difficulty grows no smaller. With living things there is the same ceaseless flow of action as that observed in what we have been accustomed to call "dead matter." The races of the earth, animal and vegetable, have come down from old time in an unbroken sequence, changing into forms determined by forces as blind — so far as the most careful scrutiny can see — as the force of gravitation which draws the river downward to the sea, or the force of the sun's heat which draws the vapor up. Purpose there is, and has been, if by the term we are to understand the immediate and proximate end of action. And final purpose we cannot know save as that general end of action which appears when the several and proximate ends are completed in one united sum.

For the sake of illustration let us consider the actions of a man who purchases a coat of a certain fashion. He goes to his tailor, and in doing so he uses the muscles of his legs, calls into his service a

cab, ascends a flight of stairs, and submits himself to be measured. Here we see in process several varied and complicated actions on the part of the man himself, associated with like groups of other and complex motions on the part of the cabman and his horse, and of the tailor and his helpers. But is it not plain that the obvious purpose of all these, and of still others in the more remote background, is the possession of the garment which was desired?

The purchaser of the coat may have other and larger ends in view. The possession of the coat may be only the means to another end, let us say attendance at an evening reception at which the owner of the garment is to meet a politician of influence, who is to secure him an appointment abroad which, in turn, shall enable him to study the customs of a strange people in whom he has long been interested. It would be absurd to point out these very commonplace connections did we not bear in mind that the illustration goes to prove the analogy, if no more, of human conduct to the processes seen in nature at large, animate or inanimate, and, furthermore, clearly to illustrate our meaning of the word "purpose."

To return to our illustration of the river. A stream flowing down a steep gradient abruptly changes its course, and runs in a direction at right angles with its former direction. The change is caused by an obstacle in the formation of the earth's surface. The purpose here served by the action of the current is the avoidance of the obstacle. Many such changes are made in the entire course of the stream, and each has its particular cause and its proximate purpose; but the sum of all of these actions and of all these ends

is contained in the remote end which is accomplished when the stream reaches the level of the sea. A person whose range of observation was limited to a few of these shiftings in the current of the river, and who had no knowledge of that remote destination upon which the stream was bent, could readily understand the end served in each particular variation of the stream's channel. So far as his observation could carry him, his conclusions would be perfectly true. And is it not manifest that the self-same logic applies to the purchaser of the coat, the sum of whose motions may be likened to those of a river which, flowing with innumerable changes of direction, and a thousand variations in the speed of its current, is brought at last to the accomplishment of that purpose toward which all its manifold and complicated activities carry it?

Let us then define purpose as that object which is discernibly sought by action; and define *highest* purpose as that discernible object toward which the sum of *all* actions is directed. With the limitations of this definition in mind, we can safely set out upon the quest of an object so formidable as *the purpose of mankind upon the earth*. Nor need we be discouraged by the seeming stupendousness of the prospect. An undertaking of apparently grave difficulty becomes more hopeful when we address ourselves calmly to a close examination of its nature and its causes; and problems of seemingly hopeless complexity are sometimes made clear when the relations which exist between their simpler parts are perceived. Proceeding from simple quantities and their relations to each other, we begin to see the bearing of these relations on the relations between other quantities. Thus we

rise to a comprehension of groups of quantities (and their relations together) as associated with other groups of quantities (and their relations between themselves). In this analysis we are led to generalizations which are seen to have an intimate relation with other generalizations arising simultaneously; and in the last and highest generalization we find a solution of the problem which, at first glance, seemed inscrutably obscure.

This is perfectly true of every generalization of science, and by generalization is meant what is ordinarily called a "law of nature." It is true of Kepler's laws as well as of the law of gravitation and the law of natural selection; of the conservation of energy, of the indestructibility of matter, and of other and numerous laws formulated by special sciences, and approved and accepted by scientific standards, although not so familiar to the man of ordinary culture as are those grand and striking generalizations which have been named above.

Any theory which shall satisfactorily explain the phenomena of social life must be built upon the lines here indicated. If we are to arrive at a generalization, or a *law*, which shall formulate the process through which society passes, we must arrive at our conclusions only by understanding the particular aspects of the general movement. We must understand, first, the individual unit itself; then the relations between individuals; then the relations which groups of individuals bear to other groups; and lastly the relations borne by individuals, by groups, and by groups of groups to the whole. Having done this, we will have before us the parts of the process we

desire to comprehend; and then by ascertaining the relations which these parts bear to the sum of them all, we will be enabled to state those relations in the form of a generalization which shall be the *law* by which the process operates.

Reverting to our illustration of the river, it will be admitted that he who follows the river from its source, observing its various deviations of direction, cannot but ascertain the end of its action when he finds that it empties its volume into the sea. He can then understand its persistent avoidance of obstacles, its tortuous windings, its hurrying over steep declivities, even its backward flow, at times, in the direction opposite to that toward which its general action tends. In drawing an analogy between the purpose of a river gravitating to the sea and the purpose of human society let it not be supposed that we are attempting to prove the equality, either in kind or in degree, of these two things. The comparison is made only to show that a knowledge of the two things may be won by the same general method.

In asking, What is the purpose of man upon the earth? we will find the suggestions made in the last paragraph but one of some use. Light may be thrown upon the purpose of *man* upon the earth, if we determine, first, what is the purpose of *men* upon the earth. But before proceeding to this inquiry, it will be advisable to examine into the life of an individual organism much lower in the scale of creation than the human species.

Let us take for example a single stalk of Indian corn, or maize. We can watch the cycle of the life of a common corn-stalk from its birth to its death.

By a mechanical process of assimilation and excretion, the plant absorbs water from the earth and gives off oxygen. In this operation are developed, from the first signs of growth in the tiny, tender shoot, all the parts and substance of the full-grown plant; the jointed stalk with its top crowned by a beautiful terminal panicle; the generative organs enclosed by protecting sheaths; and the strong framework whose structure is nicely calculated to bear the weight of the ears when full-grown and mature. In the growth of this giant blade of grass the only *purpose* visible is the very process itself of this growth, maturity, and fecundation. The function and purpose of vegetable life were well described by Alexander Pope in one of his biting epigrams upon a stupid individual who, he said, was

“Fixed like a plant to his peculiar spot,
To draw nutrition, propagate, and rot.”

Search as we may for any purpose other than that so tersely defined by the poet, and we must fail. Nutrition and propagation are the sole purposes of all the exuberant activities of vegetable life, from the microscopic bacillus to the gigantic palm.

But we find that the same truth holds when we ascend a step in the scale and pass from vegetable life to the protozoa, or those creatures in which the beginnings of life called animal are found. As we advance still higher to the observation of more highly organized forms of animal life, the same two purposes are the only ones discernible. The numberless tribes of animals in the vast oceans of the earth are, so far as man has been able to find out, moved by two

forces only — those forces which impel the organism to activities sustaining the life of the individual and maintaining the life of the race. This truth remains when we transfer our attention from aquatic animals to those inhabiting the land. Everywhere throughout that part of creation within the range of human observation, plant or animal, large or minute, directs its energies to these two ends and to these two ends alone.

Must we include man himself in this broad generalization? Are we to reduce man to the level of beasts ; to allow him no more latitude in his purposes and aims than that allowed to the microscopic germ of cholera or tuberculosis ; to extend the category of Pope's clod to the highest productions of the human race, and to place a Newton and a Shakespeare beside the sea urchin and the sponge? To suggest such inference naturally leads us to inquire wherein the purpose of man differs from that of all other animals, if differ it really does. The distinction ordinarily made to separate the conduct of men from that of the rest of animate creation gives to human action an *intelligent* purpose, while this quality is denied to the conduct of all creatures below the level of mankind. This distinction was pointed out by Rene Descartes who invented the theory that lower animals were automata and that their vital functions were merely mechanical movements, such as were seen in the ingenious devices known as puppet shows. But to man he gave intelligent action ; *i.e.* action rationally directed toward preconceived ends.

This distinction would seem to be a valid one upon a superficial consideration of the facts. It would appear at first sight that the activities of the painter

of a great historical picture were different in kind, as well as in degree, from those of a hawk searching for prey and seizing it when found. Or that the activities, mental and bodily, of the musician who creates a symphony were in no wise to be compared with those of an East Indian vampire. But such is not the verdict of comparative psychology. An intimate study of the forces which impel the painter and the hawk, the musician and the bat, will reveal identity of motive in all four instances.

It is not precisely that the painter and the musician are spurred by economic motives as directly as are bird and beast; but it will not be denied that all are animated by a desire, the gratification of which will bring pleasure — pleasure to the bird and bat in the consumption of food secured, and to the painter and musician in the concrete expression of their intimate thoughts. The desire resident in the animal is mental, quite as much so as the desire which moves the man. Both desires are gratified by activities as purely mechanical as those of any device artificially wrought by the genius of mechanical construction; and the satisfactions themselves pertain to the mental perceptions of both organisms. The profound researches of George John Romanes into the intellectual life of animals leaves little room for doubt of this uniformity of the psychic life of all orders of sentient beings — an uniformity which had been before believed and accepted by many, and which hardly needed the inductive verification in the establishment of which Romanes has been at so very great pains.

If we say, then, that *happiness* is the end and purpose of the actions of individual men, we shall

postulate that with which all men will readily agree. It matters little what may be the nature of the happiness sought, what may be the objects in which it finds expression, or the means taken to reach the end desired. Neither are we concerned whether the happiness sought be positive or negative ; whether it consist in the possession of pleasure, or in the absence of pain. To be deprived of something which in itself is a positive pleasure, may be, and often is, a cause of positive pain. Extremes meet here as elsewhere. And in precise proportion as the pleasure is great, or the pain keen, will the resultant exercise of energy prove to be intense. There is no exception to this rule. The possession of happiness, here or hereafter, is the purpose toward which all human actions are directed. The widest antitheses of conduct are thus explained, and thus only. In this respect the monk and the voluptuary, the spendthrift and the miser are one. In the entire range of asceticism — from the pious person who deprives himself of slight indulgences, or lengthens his prayer during Lent, to the friar who scourges his body and sleeps in a coffin — the purpose ever in mind is happiness, however so extraordinarily conceived. So powerful, indeed, may the motive become that in the very pain which accompanies ascetic practices the ascetic himself may find a kind of pleasure — perverted and abnormal if you like, but pleasure still.

However minutely we may examine the motives, the actions, and the purposes of animals and men, we can find no differences between them save that of degree in complexity. If the purpose of a man in painting a picture is an intelligent purpose, so is

that of the dog or the horse who sets out to find his way home by scent, or by the observation of familiar landmarks. The one is only a larger intelligence than the other, and both are alike in kind. The difference between the conduct of a kitten, which seeks a comfortable spot on the hearth rug, and that of a child which strives to obtain the possession of a toy, will be admitted to be slight. But great as may be the difference between the conduct of the child and that of a statesman who designs a great reform in government, the difference is one of quantity only. There is comparatively little intelligence in the activities of the child; comparatively much intelligence in those of the architect of a realm.

If, now, we inquire into the nature of the happiness sought for by men generally, we will find that, at bottom, it is precisely the same as that which has been observed in animals lower than man in the scale of creation. It may be stated that the first purpose arousing the energies of the individual is to *live*. In order to live he must acquire by personal exertion, either of himself or of others, the food which sustains his life. In doing this he is impelled by the strongest motive of his nature. One by one we may strike down the other purposes spurring him into action; remove from him all the concomitants of civilization; take him from the association of his fellow-men and isolate him from the contact of all but creatures which may be of use to him in supplying the wants of his vital functions—and this purpose will remain the motive of all of his activities, bodily and mental.

Sustentation of the life of the individual is thus found to be the first motive of all human action.

Without this, the individual can be happy in no degree whatsoever, and he will rate his happiness by the measure in which the functions of nutrition and assimilation are satisfied. With him, food which is at once agreeable to the taste, readily digested, and easy of accessibility, is the greatest *desideratum*; and the continuous life of his body, as free as may be from disagreeable exertions in the obtainment of the food required, is the highest purpose of all of his energies.

Given the fulfilment of this first purpose we find that from its accomplishment will arise another, as powerful, in its way, as the first. That is the production of other individuals, each of which has all the physical attributes of the parent, and is moved by like desires. In the functions by which these two purposes are served — the healthy nutrition of the individual, and the reproduction of like individuals — the great mass of mankind finds its keenest enjoyments and its most desirable ends; and these are the two objects pursued by all but an insignificant part of the human race. All other activities are secondary to those which serve these two ends. Pleasures of the intellect and the emotions are only possible — at least for the majority of men — when the basic functions of life are left free to operate with more or less fruition. Æsthetic and emotional enjoyments are entirely dependent on physiological enjoyments. Every truly pleasurable process of the mind — apart from those perverted and abnormal ones already noted in the case of the ascetic — may be measured by the quantity in which the functions of life have been satisfied.

In some men, it is true, we may find that the functions of the body are displaced in large measure by the functions of the mind ; that the satisfactions derived from the emotions and the intellect may be disproportionately large as compared with those derived from the functions of nutrition and propagation. But it will be observed that these are exceptional cases. They vary from the norm in a lower degree than does the ascetic, on the one hand, and the sybarite on the other. But of the norm, the general proposition holds good. Pleasures of the imagination and of the intellect are strengthened when the purely animal desires are normally gratified. From that gratification flow all the varied desires and activities of men, and out of it arise the manifold structures and functions of the minds of men even as the trunk, the branches, and leaves of a tree arise from the roots in the earth beneath. Beautiful as the tree may be, the lustre of its foliage and the symmetry of its form depend upon the vital process going on under the ground at its roots. Leaves and twigs, even whole branches and parts of the trunk, may be destroyed, but vegetation will still go on so long as the channels of the basic forces which move the structure to activity be not obstructed.

It would seem, however, that the twofold process of these basic forces and functions disclose a singleness of purpose in its general operation. However well the individual may serve the purpose of sustaining his life, the lives of particular individuals seem to be secondary to the inclusive purpose of the maintenance of the race. The force which moves man to eat, in order that he may live, is secondary to the

higher force that moves him to propagate in order that the race may not die. The "Prodigality of Nature" is a proverb, and much observation has been made as to the means by which races are maintained in spite of the forces which tend to destroy them. The individual is of little account in nature except in so far as he serves the purpose of procreating his kind. In the process of natural selection the mechanical forces at work destroy countless individuals, but the forces all aim at the maintenance and increase of races, the race of man included.

In human society the action of all forces is automatic, and as much so as it is in any other part of nature. We see that the interests of the individual are always made to serve the interests of the community. Men may die, but man may not. The possessions, not only, but the lives of individuals are sacrificed for the common good. Extinction is as abhorrent to a community, a nation, or a race, as it is to an individual. The individual will joyfully sacrifice, even at great pain, parts of himself in order that his life may be saved. Nations sacrifice their individual members, and groups and classes of their individual members, that the nation itself may survive. Man is the strongest, the most constructive, and also the most destructive, animal on the earth. To serve his purpose of individual and racial life he levies tribute on all nature, organic and inorganic. His life and propagation mean suffering and death to myriads of creatures beneath him. Out of the death of inferior organisms arises the life of the human race. From the poignant pain of weaker sentient creatures we see emerge the smiling face of human

joy. Individuals among men must die that the sorrow of their fellow-men may be assuaged. Tears and blood are the foundation-stones on which the structure of human liberty is built, and man moves forward upon a highway laid down in death and destruction.

It is in this upward and outward growth of humanity that we are to seek the origin of that widening process of moral thought described in our first chapter. And it is in the forces and functions underlying that growth that we can most easily and certainly ascertain the beginnings of moral ideas — ideas, that is, which find expression in the consciousness of rightness and wrongness and in the common conduct of men.

Much of the current discussion upon social matters is made highly obscure by the use of terms which are forced upon it by the needs of scientific diction. Professor Huxley once said that many learned writers place a capital letter upon words such as the Unconditioned, the Unlimited, and others of like kind, to frighten the common people — much the same as grenadiers are topped with ferocious head-gear. The grenadier is seldom as fierce as he appears to be. So it is with many books written upon subjects of living interest to the average man, but which are couched in terms calculated to affright that person who is easily impressed by exteriors.

When one reads of the "Physical Basis of Ethics," one is tempted to drop the subject then and there if one have no pressing need to pursue it. But formidable as the phrase may appear, it hides no really difficult matter. Scarcely more difficult will be found the subject covered by the no less seemingly impressive,

if more obscure, expression, "Moral Philosophy." These terms are used only to designate those questions in which every thinking person finds an interest. The origin of the idea of right and wrong is to be found in the large and general facts of human life, rather than in the solving of some remote and abstruse problem which has very little bearing upon human affairs.

If you ask the common man why he advocates the restraint of a murderous person, he will tell you that he does so because the unrestrained taking of human life is a personal concern with himself. He values his life above all things else. It matters very little to him whether the menace to that life inheres in a human form or not. Every individual in a community in which a wild tiger is known to be at large is highly interested in the capture or the death of the animal. Why? Why, if not because the freedom of the beast is a danger which threatens the life of every member of the group? And the same solicitude would be manifest if, instead of an untamed animal, the danger took on the form of a homicidal maniac. No less solicitous is the individual man when his life is endangered by the conduct of a fellow-man who is not insane, but simply vicious.

It is a character of man, as well as of sentient creatures in general, to shrink from pain. If we ask why, we can only answer that such is the fundamental law of life. The sensation called pain is antagonistic to the very process of life itself. And as one of the necessary conditions of life is freedom from pain, — freedom at least within certain definite limits, — the living organism recedes, by this natural impulse,

from circumstances which hinder its growth and which limit its freedom. Pain, therefore, which has been found to restrict the functions of life, is as antagonistic to the living organism as freedom from pain, which enlarges life, is the reverse. Animals, high in the order of creation, will fight for life until they are torn asunder. And at the bottom of all ideas of morality lies this function of life which is so dear to all living creatures, human or otherwise. Thus it is that man's mind has arisen to that supreme conception of wrong found in the universal abhorrence of wanton murder.

No need to look for metaphysical or hidden origins of that idea of wrong pertaining to the taking of human life without justification. And the only justification conceivable is that which is found in the desire of men to save and protect their own lives from the malicious activities of others. As a general rule, all moral considerations are swept away when the question becomes one of life or death between men, — when the supreme need of the moment is the preservation of self, shorn of all the artificialities with which custom and wealth have clothed it. So forcible is this general truth that we marvel at any apparent exception to the rule. The individual who, for the moment, sets aside his inborn love of life, and gives up that life to save others, excites the extraordinary and universal admiration of mankind. But these instances are very rare indeed. To *risk* one's life in the salvation of one's fellows is deemed the noblest act conceivable. But deliberately to go to one's death for the sole purpose that others may live is not a common or an easily conceivable practice.

We are lost in admiration at that individual who prefers death to dishonor. But death such as this is only the consummation of a desire for larger and ampler life denied to the individual by circumstances. For him the pain of dying is not so poignant as the pain he would feel if, in living, he could not enjoy the free and ample life he loves. And he who lays down his life that others may survive is moved by a similar motive. It is not that he is in love with death, but rather that his own life is insupportable in the pressing presence of a supreme want which death alone can satisfy.

These simple facts of consciousness are described under the somewhat euphemistic and profound phrase "the utilitarian origin of moral ideas." That phrase is only another way of saying that men's conduct is determined by their desires for happiness; and that their conceptions of right and wrong arise from experiences which have been found to be pleasurable, on the one hand, and painful on the other. This view of moral conduct is the only method we can adopt if we would account for the ordinary actions of men by explanations appealing to common sense. To encompass an act which, in its absolute motive and effect, can bring pain, and pain only, to the doer of it, is a proceeding the very thought of which is repugnant to the minds of healthy human beings.

Thus the fundamental conception of right is traced always to the motive impelling men to conduct by which the process of life itself — physical or mental — is made safe and free. This is the motive lying at the source of the actions of individual human

beings, and lying also at the source of those larger actions encompassed by numbers of individuals acting together, — actions which make up the pith and the process of universal history. To exist amply, to live freely, to pursue unhindered those ends which, when found, bring to the finder the happiness and the comfort he most desires — this is the purpose of individual men, and the purpose of nations, so far as any effort of the human mind can know or discern.

More clearly to show the intimate connection between the growth of moral ideas and the basic functions of nutrition and propagation, we shall have to reconsider happiness, as the purpose of men's activities, in another light. The normal man desires as much freedom as possible in supplying the wants of his body, and in mating with a woman who shall rear him a family. The science of economics is based on the energies of men exerted for the purpose of satisfying these two desires. All the labor of society is performed in order that men may fill these two functions.

The first desire of every normal man is the possession of that health which will enable him to digest and assimilate food which shall be agreeable to his palate, secured with efforts as free from pain as possible, and consumed in surroundings which are, on the whole, pleasing to his senses of sight and smell. This satisfied, his next desire is to share his possessions with the woman of his selection, and to surround their mutual lives with a home. The degree into which material comforts and objects of intellectual and emotional use enter into this retreat have but a secondary bearing in the lives of the man

and his mate. The home of the successful man, together with his collateral pursuits of pleasure, touches almost all industries and suggests all others. Thus we find that all the elements with which the science of economics deals spring, directly or indirectly, from the efforts of men to secure to themselves those means which facilitate the gratifications of desires by which the race is maintained. We have already seen that the pursuit of these means constitutes the principal activities of society regarded individually and collectively.

In view of these facts, it is easy to understand why human life is the most "sacred" thing in the estimation of most men. In the shifting of the standards of right and wrong, the sanctity of human life has constantly increased, while the sanctity of human beliefs has undergone a reverse change. The destruction of life is regarded with more and more abhorrence; but disregard of human beliefs, which was once as great a crime as murder, is no longer seriously considered. Formerly the most sacred things in the estimation of men were deity and the instruments used in the worship of deity. Compared with these, human life was a trivial matter. It is aside from our purpose to inquire into the origin of that belief. It is enough for us here to know that such belief once prevailed, and now prevails no longer.

In the opinions of men now, the most unapproachably sacred thing they know is *the life of a man*. Men may with impunity question the wisdom of deity, deny its very existence, or speak with contempt of the God of any nation or individual. But he who

would attempt to advocate the right of private murder would be restrained as a dangerous lunatic. Even the utmost profanation of a sanctuary in which deity is worshipped is reprobated with no more condign punishment than that which is meted out to those guilty of minor offences.

Next in order to the sanctity of life comes the sanctity of those means whereby life and its propagation are facilitated — property. To defend himself in the possession of those instruments man is permitted to slay his fellow. It is not that property is in itself a sacred thing, but it is sacred because it is the means whereby man is enabled to live and to procreate his kind; and any attack upon it is an indirect attack upon the freedom of its possessor. This intimate relation between life and property is the origin of property rights. There can be no other. The nature of the *title* to property may or may not be a subject of debate; but the origin of property itself is clear. It is understood, of course, that the word property is here used in its economic meaning, as the right to the exclusive use of things by an individual, and not in its common acceptation, as meaning the things themselves. Thus we find it possible that men may dispute about the quantity of wealth of which individuals shall be given the exclusive use. But no man has ever dreamed of limiting the right itself. The sanctity of that right increases regularly with the increase of men's sympathies; that right is the most zealously guarded and the most vigorously defended of all rights save the right of life itself; for the enforcement of that right nations have created the most complicated systems of legal and political

machinery ; and the entire mechanism of the world's trade, industry, and commerce, depends upon that right, and upon that right alone

The first importance of life and property is, therefore, seen to be a theoretical truth. And it would be a strange anomaly did not human concepts of ethics naturally arise from the ideas of the two processes of life connoted by it. Of the laws enacted by legislatures, all but an insignificant number have directly to do with matters of property and of life ; whereas those which have not such direct relation are derivative from that relation, and necessarily so. Liberty means, in the minds of most men, that freedom of action which shall enable them to secure for themselves the gratification of the two basic desires, supplemented by secondary gratifications which shall enhance the primary ones. No question is an ethical one which does not touch nearly or remotely upon the liberty of the individual in the pursuit of his physical satisfactions. Analysis, however close, will ever lead us to this inevitable conclusion.

The separation of religious ideas from moral ideas comes about naturally when religious motives are seen to have little effect upon the industrial work of the world. The importance of deity as an element in the economic life of man has been so far surmounted that it may be said to be now evanescent. In pagan, and in earlier and later Christian times, commerce and industry had their special religious patrons. Prayer to some divinity, or to some tutelary saint, was the necessary condition of success in every incipient enterprise. In pagan and Christian times each trade or guild had its own patron god or saint ;

many ancient crafts to-day preserve the tradition in their names. But few now believe that industrial or commercial enterprises are dependent for success upon anything but the physical necessities of men for the services rendered or offered. Purely ethical conceptions are, therefore, made up of relations as between men and their fellow-men, and take only secondary recognition of relations which may exist between men and deity.

We may state the proposition in another and more general way by saying that the ethical importance of any act varies with its distance from the two primary processes which sustain and propagate life. An act is right or wrong in the degree in which it facilitates or interferes with the physiological liberty of the majority of men. Thus the *summum malum* is the destruction of human life, and the *summum bonum* the possession of perfect freedom for the normal satisfactions found in those processes by which life, individual and social, is sustained. Those things are deemed good by which these purposes are served; and those bad which hinder them. The more closely an act trenches on this freedom the more important it becomes, for good or evil, in the minds of all but the insignificantly few. What men will do for their lives, their homes, and their children, every battle in the history of the world will tell; and liberty is no more clearly defined than when it is defined by the three words just used. In the new light of the economic interpretation of history will be found many causes of war which were before obscure. Some scholars do not hesitate to say that *all* wars have had economic causes; but without insistence

upon this extreme view, its principle would seem to be justified by many of the considerations which have arisen with the new method of treating history.

If by the term "economy" we understand those processes used by men in the support of the lives of individuals and the maintenance of the life of the race, we shall find that common conceptions of right and wrong are based upon the economic relations of men to their fellows. A *good* citizen is one who so conducts himself as to earn the esteem of his fellow-citizens. To do this he pays his debts to the last penny, he does not overreach those of whom he buys or to whom he sells, he does not misrepresent the quantity of wealth that is his in a manner which brings suffering upon others, he pays his taxes to the full extent required by the law, and he lives up to the letter and the spirit of the contracts which he undertakes. Over and above all this, he shares his honestly acquired wealth with others less fortunate; he gives to charity and to education, and he encourages effort among those he employs by paying them a wage somewhat in excess of that required by the merely mechanical demands of the labor-market. Again he is active in reforms which purpose honest administration of the laws by executives, and incorruptible enactment of laws by legislators. And in doing all this he impliedly regards the lives and the persons of his fellow-men with due solicitude. On the contrary, the *bad* citizen is one who takes the opposite course; and he is considered bad in just that degree in which his conduct varies from that of the good man.

But each of the acts here specified has an eco-

conomic value. The citizen may entertain the most extraordinary religious beliefs, or he may entertain no religious belief whatever. He may express the most profound doubt as to the truth of current religious convictions, and yet be appraised as a *good* man; and if he should contribute liberally to the support of religious institutions, even while he denies faith in any or all of the dogmas of religion, he is accounted a thoroughly good man by his beneficiaries, and is even given an extraordinary moiety of praise because of his very lack of faith. He may be noted as one who loves to exaggerate, and even lie about trivial matters, but this character is regarded with levity so long as he is rigorously truthful in matters of weight — that is, in matters economic. Thus, the moral importance attaching to religious life is, in the judgment of most men, of no importance.

Habits of intemperance are condemned, not because they are wrong *per se*, but because they are injurious to the health of the individual who indulges in them, and, by implication, to others who may be led to imitate the example set. Seclude the intemperate man from all contact with his fellows, and place him above the possibilities of his habits influencing his possessions, and his conduct is still wrong because these habits are hurtful to his health. But this is a narrow view. There is a negative as well as a positive culpability. For such individual as this will be condemned, not alone for interfering with the healthy processes of his body, but for his avoidance of that conduct which is commonly called *duty* to his fellow-man, and duty, as we have seen in the case of the typically good man, is a matter of economy. The

same logic applies to ethical ideas which have to do with the relations between the sexes. The sanctity of marriage arises from purely economic causes. The essentiality of the wrong in promiscuity consists in the interference such promiscuity causes in the normal process of a society whereby progeny is propagated and reared. Relations between the sexes have a moral value in all communities, savage and civilized. All communities may not have similar moral ideas in this respect. But moral importance is everywhere associated, when men live in a group, with conduct concerning the relations of the sexes. The origin of this universal moral character in man is therefore most probably to be found in the universal fact of sex and propagation.

The growth of human social groups, as demonstrated by anthropology, begins with the family, and from these simple elements are built up elaborate social systems of tribes and races; and from these again are developed nations, states, and governments.

Thus while anthropology deals with the natural history of man, the causes which produce the phenomena of that history are *vital*, and these are to be examined by the science of biology.

The science of psychology inquires into the phenomena of the minds of men, and shows how these phenomena are intimately associated with the vital functions, and are, in fact, inseparable from them. Men desire to live and to propagate. To do these they require certain necessary means, and their energies are expended in the manufacture of such means. The *things* which furnish these means are distributed among the men who create them. And it is with the

causes of the peculiar processes by which this creation and distribution are effected that the science of economics is concerned. As the nature of the process by which the creation and distribution takes place is clearly determined by the desires of the men in want of the things, so it is seen that the science of economics (which deals with that process) is inseparable from the science of psychology (which deals with the desires). And it is clear, furthermore, that these two sciences are inseparable from the science of biology, which deals with the nature and causes of the vital process out of which the mental process flows.

If we say, for example, that the price of wheat rises and falls, the business of the economist is to inquire how such change takes place. His inquiries lead him to the discovery that price is the measure of the *value* of wheat, and that this value is determined by the desires of men for the possession of the commodity. The play of these desires and their effect upon the movements of the commodity, from one market to another, from the time it is grown and matured to the time it is consumed, is the function of economics. But the nature and the causes of the desires themselves are the concern of the psychologist. The economist explains *how* the play of the desires moves the wheat and determines its value. But the psychologist explains *why* the desires are present in the minds of men. In doing this he trenches on the field of the biologist, who inquires into the vital functions underlying the mental ones. If, now, we reverse the order we have followed, we find, simply enough, that the desire for life creates a desire for the things which sustain life.

Among these things is bread. Bread is made from wheat. Men, therefore, desire the possession of wheat, and this desire moves them to all those activities observed in the intricate relations of the many industries by which wheat is grown, garnered, transported, and exchanged.

But what is true of wheat is also true of every other thing produced by art. It may be said that an instrument manufactured for the micrometrical measurement of distant stars has nothing to do with the vital processes of the astronomer who uses it, or of the student who is taught the results of his observations. But in such observations the astronomer merely gratifies a desire which depends for its existence upon the brain nourished by those vital processes; a desire different only in degree from that of the savage man who, with full stomach, becomes interested in the structure of the skeleton of the animal whose flesh he has just devoured. Analysis thus leads us, step by step, from the simple ideas which furnish the motive for the creation of wealth, to those more complex processes out of which develop the manifold activities of men, and the entire mechanism of industry.

From these complex activities and intricate instruments of gratification flow more complex ideas of the relations of men to each other, and the relations of individual men to the mass. As we have seen that moral conceptions are primarily evolved from the desires of men first to live, and then to propagate, we are warranted in the conclusion that probably *all* moral conceptions are only further evolutions of the same primary material. This conclusion is, after all, but a corollary of the laws of the conservation of

energy and the indestructibility of matter. Given the basic functions of nutrition and propagation, and the modes of their operation in the environments we see about us, and no other result than that which is before us is conceivable. The science of ethics, then, which deals with the causes of men's conceptions of right and wrong conduct, leads us directly to economic science, which, in its turn, is brought to mental science for a knowledge of more remote causes; and these are themselves explained by the science of life.

As the whole cannot be greater than the sum of its parts, it would follow, from what we have said, that the facts we have been considering make up the sum total of the material with which social science must work. If we are clearly to understand *how* social movements take place, we must first understand *why* they take place. Social science, to be useful at all, must be useful in this direction, and with this end in view. It matters not how great may be the quantity or the variety of the knowledge accumulated about man and his institutions; no definite science can come from such observations until the causes at work have been laid bare. If the causes of social action are to be known, they are to be known only by the light thrown upon them by the sciences of ethics, economics, psychology, and biology. When social science has shown the connection between the facts and the causes developed by these four departments of knowledge, it has done all that it is possible for it to do.

The elements of social action are thus found in the motives which impel men to conduct by which the purpose of the individual is best served, and by which

his life is made free and ample. The purpose of the individual man, as the purpose of the individual plant or animal, is found in the very processes whereby the individual is enabled to live and to propagate. This purpose, in creatures somewhat lower than man in the scale of creation, is, we have found, an *intelligent* purpose. The intelligence with which the purpose is pursued is larger in man than in other animals; it is larger in mature men than it is in immature ones; and it is larger in some mature men than it is in others. This difference of intelligence with which the purpose is sought varies, too, with various groups of men. One nation pursues it with much intelligence, another with little; but the purpose itself is the same in all. The higher the degree of intelligence used in the activities which tend toward the accomplishment of that purpose, the better will that purpose be served.

Now what is meant by the term "an enlightened race"? There need be no dispute about this. An enlightened race is one which has created a mode of life, a system of laws, and a mechanism for their enforcement, whereby the individual is not only protected in his *life* and *property*, but is left free to indulge the gratification of desires arising after the satisfaction of the two primary ones; a race which has, by intelligent action, reduced, as far as possible, the pain attendant upon the obtainment of the means of living; which has increased the quantity of these means in a degree enhancing the pleasure of individual existence, and the rearing of offspring; a race strong enough internally to secure for its integers the highest available freedom in the gratification of their

desires, and strong enough, externally, adequately to protect them from interference in these satisfactions from an enemy without.

Such a race may be by no means satisfied with its internal state. It may be in the process of striving more widely to enlarge the liberty of its individuals. It may be seeking to create new and easier methods of obtaining the things it needs to gratify its desires. It may be engaged in efforts to add to the quantity of the intelligence with which it pursues its purpose. But all of these activities are directed, not toward the alteration of the purpose, but toward reaching the purpose with the least possible pain. So far as the sciences of life, of mind, of utility, and of conduct can tell us, this is the *only* purpose of man and men upon earth: The full and free exercise of those functions of nutrition and propagation which sustain the life of the individual and maintain the life of the kind.

But are we to rest content with this generalization? Are we to halt at what seems to be only the threshold of inquiry and refuse to concern ourselves with those larger questions which have drawn to themselves the minds of men in all ages with irresistible fascination? Are we to endeavor to find no *higher* purpose for life itself than that discovered in the mere functions of living? Are we to be distrained from the quest which shall reveal to us the relations of life at large to the universe, and, perhaps, the *great* purpose toward which all the activities of man not only, but of universal being, are tending?

These questions suggest a science the province of which shall include that of every other science, and

the business of which shall be to understand the relations of *all* facts to one another, and of each to all. This is Ontology—the Science of Being. Men's minds have been busy with questions of ontology from the earliest times within historical reach. They desired to know the purpose of universal being before they had discovered the purpose of the most insignificant organism in the whole field of observation. They wished to know the process by which the stars had come into existence before they had discovered what the stars were made of. They discussed the nature of the mind before they had found out the anatomy of the nerves. They were engaged in formulating laws according to which the earth was produced before they knew the size, shape, weight, constituents, or motion of the earth itself. They constructed theories of creation with no knowledge of the conservation of energy, or of the chemical or physical properties of matter.

It was these very efforts which resulted in the fatuous absurdities into which some of the old philosophers were led. Thales believed that water was the primary material out of which all forms of being had emerged, and into which all forms would return. A knowledge of the bare fact that water itself is a combination of two different things would have prevented him from reaching such obviously wrong conclusions. It is not meant here to disparage the speculations of antiquity. The ancient philosophers were trying to do only what man has been trying to do ever since. But the fruitlessness, not to say viciousness, of their efforts is seen in the great mass of erroneous conceptions of natural processes which their work left as an

heirloom to their intellectual posterity. If science is to understand the nature and the action of being in general, it can arrive at that understanding only by slowly enlarging its knowledge of the various parts of the structure whose function it wishes to comprehend. Had Thales known that water itself was resolvable into oxygen and hydrogen, he never could have entertained the absurd thought that water was the element of elements.

Problems of ontology are as interesting to-day as they were in the time of the ancients. Men aspire now, as they did then, to know the cause and the purpose of the great panorama of nature. They aspire now, as they did then, to grasp the hidden meaning in the varied phenomena of life and of mind and of matter. They seek now, as they did then, to account, by some rational explanation, for the existence of the totality of things, and for the order of the flux in which all things are observed to run. These aspirations, if anything, are deeper and higher now than they ever were before.

But while men admittedly know more now than did the ancients, they have acquired that knowledge by a method totally different from that used by the ancients. While the generalizations of modern observers are not as high as those indulged in by the unguided fancy of antiquity, they at least possess the merit of being unassailably and demonstrably true. If men do not now believe that water, or air, is the element of elements, the primary material of the universe, it is only because they can assert and prove the contrary. If there is no longer any dispute about the shape of the solar system, it is because

men left off guessing and set themselves to the task of patiently observing the less apparent motions of the heavenly bodies. If there is danger no longer of men believing that the earth was formed in a few hours, it is because they have learned the nature of the materials out of which the earth is made, and the properties, chemical and physical, of those materials in different degrees of temperature.

When the minds of men ceased to fly at generalizations which, in their very nature, could not be demonstrated, and addressed themselves to the observation of minute processes, generalizations which were easily demonstrated became possible, and not until then. Ontology, if it is to be of any use, must rise to its general laws in precisely the same way as that which safeguards the progress of other sciences. Patience is the prerequisite of all scientific success. But that patience, which can wait indefinitely without leaping at conclusions in no wise the subject of proof, is the prerogative of only a few great minds. If the universal process of things has before it a purpose in which are united all minor purposes; if universal activities tend toward the accomplishment of one all-inclusive end, the nature of that universal purpose and of that end can be known only when the sum of all knowable activities is mastered.

“The Destiny of Man and the Universe” is an expression commonly heard. Those who use it seem to have some conception of the primary importance of man, thereby implying that man’s destiny differs, in some unexplained way, from that of all things else in existence. Freely admitting that they can see the purpose — and the highest purpose — in the life pro-

cess of plants and lower animals, they are disposed to exempt the human race, or at least the "civilized" part of it, from those laws which they are willing to extend to the rest of creation. But when pressed for their reasons in so doing, they are compelled to carry the discussion quite out of the range of human observation. They fall into the ancient habit of flying at conclusions which are not warranted by facts. They argue somewhat after the fashion of Thales. "There must be a primary material. It is my conviction that this primary material is water. Prove you that it is not."

We do not say that this method of reasoning is wholly without advantage to those who practise it. It assumes something which can neither be proved nor disproved. Thales could not prove that his postulate was true; but no more could his opponents prove that it was not. The method of Thales is not altogether unknown to more modern controversialists. But the insecurity of that method (so far as positive knowledge is concerned) becomes evident when we meet the Thalesian argument by an adoption of the Thalesian method. This was done by Anaximenes. "The primal material," said Anaximenes, "is air. Prove *you* that it is not!" The proof that both were wrong was not secured by the assumption of a third primal material, but by a careful examination of the nature of water and air, and by the discovery that one was a compound of two different gases, and the other a mixture of several.

Knowledge can never be furthered by the assumption of that which, in its nature, does not admit of positive proof or of positive disproof. The theories

of Thales and of Anaximenes had been most useful if they had induced men to investigate the nature of water or of air. Theory must be ever in advance of knowledge. It is useful only while it serves to stimulate new observations. In the growth and development of human knowledge false theories are not only useful, but necessary. Theory ever must be adjusted to the new facts accruing from its adoption. And when fact and theory are in equilibrium, speculation ceases, and knowledge takes its place.

These considerations make it clear that any theory of an universal purpose of things must be based upon observation of particular purposes and their relations to one another. Ontology is a science which may be said to be yet unborn. A bare metaphysic will hardly satisfy the demands of the cautious mind. But some bold intellects have dared to suggest the general principles upon which a science of ontology may be rationally reared. Seeing that energy and matter are everywhere existent, they assume that the quantity of both is constant. They point out the modes of their operation in particular processes, and infer that the process through which the aggregate passes is analogous to the process through which passes each of its parts. This view of things has been called Evolution. It is a theory which has profoundly affected the educational methods and the religious thought of the age. It is a suggestion as important now as was the suggestion of a *prima materia* in the time of Thales. But it differs from Thales' theory in that it supports its claims with a superabundance of facts, drawn from the realms of every science, and unified in a consistent whole. Yet it must be said

that, however strong may be the presumption in its favor, it has not been proved.

The premises of the theory of universal evolution are admittedly true. It is true that all forms of life have been evolved from simpler forms and from a few ancestors. It is true that language is the product of slow growth upon lines analogous to those of vital growth; that nations and the institutions of men are evolved out of the conflict of forces which we see before our very eyes in the present day, and that knowledge itself progresses much in the same way. We have evidence to show that the earth was wrought out of material which preëxisted in a very different form from that which we now see. And it seems no less evident that the solar system was slowly reduced to its present shape and motions by physical and chemical changes of an evolutionary character. There are excellent reasons, too, for the belief that star clusters have been differentiated from nebulæ. Spectroscopy has established the fact that the constituents of remote stars are identical with those of the sun, and that the earth is composed of substances all of which are to be found elsewhere in space without respect to distance. Gravitation shows us that the most intimate connection exists between bodies separated by inconceivably vast gulfs of space. The light of a star billions of miles away readily effects remarkable chemical changes upon a photographic plate.

These facts go to prove the unity of nature, and warrant the presumption that the minor processes of evolution, open to our observation in things immediately around us, are but parts of some universal process which is probably of a similar kind. And every

fresh discovery adds to the probability that this presumption is true.

Yet, however logical may be the conclusion that evolution on the universal scale is similar to that which we see in smaller aggregates, we are not warranted in fixing the limits of universal purpose. Professor Pearson has wisely said that the scope of science must constantly enlarge ; but he no less wisely adds that the goal of science, that is, the complete interpretation of the universe, is an ideal goal, marking the direction in which science moves, but at the same time a goal which never can be reached. With this remote purpose, it is true, social science may concern itself, but only in so far as that purpose is inclusive of the purpose of man. The science of society, from the standpoint of the ontologist, is hardly more important than astronomy or geology or physics or chemistry. For while social science finds useful the discoveries of every other department of inquiry, still it is improperly called the "science of sciences." Indeed, if it be true that the universe is passing through a process of which all other orderly changes are but parts ; if it be true that nature, throughout the entire range of existence, is one united whole ; if it be true that the movements of star systems and the minute changes in micro-organisms are bound together by some law of force which acts upon the one at the same time and with the same purpose that it acts upon the other, then the inference is clear that divisions of science are like divisions of time or periods of history — purely arbitrary matters. And, as a matter of fact, this very view is becoming more acceptable to careful men every day.

We have seen that between the vital changes going on in the individual and the changes observed to be going on in society there is a close and causal association. If the very thoughts of men are really rooted in the functions of their bodies, may we not go farther and say that life itself is derived, in its *origin*, from what is generally characterized as "dead matter"? The theory of "spontaneous generation," or the abiogenetic theory, is held to be true by many naturalists. These urge the necessity of the belief that life has sprung from matter ordinarily described as inanimate. This theory has not been experimentally proved to be true. In fact, experiment and observation apparently go to prove the contrary. There is no evidence, experimental or otherwise, which shows that life has ever arisen except from some preëxisting form of life. But this theory is a conclusion flowing from the laws of the conservation of energy and the indestructibility of matter. Only two hypotheses can account for the existence of living things. Either some power extraneous to matter has, by a special effort, endowed certain quantities of matter with the property of life; or matter has always possessed the potency by which energy is changed into the special form seen in living things.

The advantages in favor of the latter theory are found in its extreme simplicity. We have no reason to believe that the sum of the energy, or force, in the universe is ever lessened or increased. We know that living organisms simply convert one form of energy into another form; that organic matter does not differ in its elements, but only in its combinations,

from inorganic matter; and that the processes used in effecting the metamorphosis from inorganic to organic forms are purely mechanical. Thus far the need of an extraneous power is nowhere evidenced. It is only when we come to the origin of life itself; the *act of metamorphosis* by which a living machine is formed where there was none before, that it has been deemed necessary to introduce an extra-cosmic force into the problem.

On the other hand, it is contended that it is impossible for life to emerge out of matter called inorganic without the intervention of some power other than that found in matter itself. Nowhere, it is argued by those who support this theory, do we find that living matter is derived from dead matter. Experiment has not been able to produce life, and no one has as yet found nature *at work in the act of transformation*. Therefore, life is an act of creation by a power *above* nature and independent of natural law.

The number of the acts of special creation which were once held to be necessary has been reduced very materially by the researches of very modern times. It was formerly believed that the sun, the stars, and the solar system were created in the state we see them at present. This is now known to be untrue. It was formerly believed that species were originally created as we find them now. This likewise has been proved to be erroneous. But if old opinions have receded, step by step, before the encroachments of positive knowledge, they have surrendered only after struggles more or less intense. Men have admitted that they were wrong in the belief that man was made by a special effort of an extra-

cosmic power, and concede that he was slowly developed from preëxisting forms of life. But that life is itself the product of merely natural forces they still refuse to believe.

And yet we are forced into the admission that one of these two theories *must* be true. In the absence of positive knowledge we are warranted in the adoption of a theory the principles of which are most in harmony with observed facts. It is as difficult to prove now that life was not produced *ab initio* by the effort of an extra-cosmic power, as it was to prove that Thales' postulate of a primal material was not the true one. The mere absence of evidence to the contrary in no wise supports a positive assumption. But the absence of evidence to the contrary often *does* support a *negative* assumption, so much so, indeed, that this principle is the one upon which is based the entire theory of criminal law. In the absence of any positive evidence whatever that a man is guilty of a crime, he is held to be innocent. He is not required to prove that he is innocent. Those who assert that he is guilty must substantiate their charge by facts which fix the guilt. But if there is strong presumption of guilt, then the absence of negative evidence becomes highly valuable. This principle is commonly used by physicians in what they call "diagnosis by exclusion." Certain symptoms indicate the presence of a number of diseases. By eliminating one disease after another, because of the lack of some typical symptom, the diagnostician narrows down the number of causes until he arrives at *one* disease which is recognized as the cause of them all. If, of a number of possible causes, all but

one can be stricken out, the conclusion that the remaining cause is the true one rises to certainty.

In a case of this kind negative evidence is used for the proof of a positive assertion. And it is this method of "diagnosis by exclusion" that is used by those who support the theory of spontaneous generation. There is no positive evidence, in any quantity, of the intervention of an extra-cosmic power in any of the particular processes of nature. Interpositions of providence are no longer claimed by anybody in the action of the tides, or in the vital changes going on in vegetable or animal life. The presumption is that if it be absent from all of the processes we do know, it is absent from any particular process with which we are not acquainted.

The diagnostician who would assume that failure of his patient's eyes was due to extra-cosmic intervention, simply because he could not discover for it a natural cause, would be deemed an inefficient practitioner. His patient would seek for an oculist who had a reputation for *finding natural causes*, and who had no faith at all in divine intervention, at least in the matter of eye disease. Why? Because *many* diseases of the eye have been found to be caused by some simple obstruction in the function or the structure of the organ, or by some defect in general alimentation. And the pathologist assumes that *all* diseases of the eye are due to similar causes. If pathologists had allowed the consideration of divine interposition to have any weight at all in their investigations, their science had been useless and, in fact, impossible.

But it is this very exclusion of extra-cosmic causes

which alone has made possible the progress of sciences other than that of pathology. A disease may make its appearance which can be accounted for by no process known to pathology. But for that reason do pathologists assume that it is due to a special act of providence? No. They assume the very reverse. If, now, careful and long-continued research fail to account for the presence of the disease by any known facts of abnormal function or structure, do pathologists *then* fall back on divine interposition? Again, no. In spite of the absence of all evidence to the contrary, they still assume that the disease is naturally caused. The conclusion that it is *not* caused by an extra-cosmic power is as certain, in their minds, as if the negative evidence were as strong in this particular instance as it is in others.

But this is precisely the position taken by those who support the theory that the origin of life is a natural process. They point to the accumulated evidence of ages as showing no indication of an extra-cosmic force in any natural phenomenon either of life or of mind or of matter. They assume, then, that since life is a natural process in all of its manifestations, its origin is to be found in a natural source. That origin could have come about in but one way — the slow or rapid development of living forms from forms of another kind. If the earth, as we have reason for knowing, was at one time heated to a degree at which life is impossible, the germination of life must have taken place with the chemical and physical changes which accompanied the subsequent cooling of the planet.

Yet when even this theory is accepted by those

who still cling to the extra-cosmic power as a first cause, these latter will say: "We may safely admit your conclusion in a general way; but this admission will by no means invalidate the claim that all these phenomena you call natural are still sustained by an unaltering and continuous act of interposition; that every natural process is sustained in its orderly progress by a sustained effort on the part of the extraneous power."

This, it would seem, is a strange begging of the question. It is an assumption of the very premise that is denied. It is essentially the same as to say, "There is no evidence of extraneous interposition in any particular act of nature we know. Therefore, extraneous interposition is everywhere in operation." Or, "No human being has ever been found with a proboscis like that of an elephant. Therefore, we assume that *all* human beings have probosces like those of the elephants."

There is yet a third party of interventionists who will admit the strength of the exclusion theory in all respects except the *origin of existence itself*. These assume that the universe was created out of nothing by a power which existed before and independent of it; that upon the matter and energy thus produced was impressed the necessity of action in that order, or with that sequence, which we call natural law; and that with the cessation of the special act by which this production was consummated, the universe was left to obey the tendencies made inherent in it from the beginning.

This assumption differs from the other assumptions considered in that it is impossible to show its improb-

ability by comparison. *There is only one universe.* And, inasmuch as nobody can prove the probability of an extra-cosmic influence upon the greatest or most insignificant phenomenon therein, it is evident that nobody can prove the absolute creation of the whole by facts which themselves negative that very conclusion.

It should be clear, then, that the work which the science of ontology will have to do shall deal with phenomena classified by sciences which have found and described the causes of natural action. If any great purpose, of which the purpose of human society is but an insignificant part, be found, it will be found to be the motive of universal action. Such universal purpose is held by Herbert Spencer to be no more or less than the operation on an universal scale of the processes we see going forward in the smallest aggregates — evolution and dissolution. Or, to state the proposition in other words, *the purpose of the universe is the very process through which the universe is observed to pass.*

It is this — shall we say *purposeless* — conception of things which has led many earnest persons to a rejection of that profound synthetic philosophy which attempts to dispose of every question which can possibly be entertained by the human intellect. The conception is not new. It is the principle upon which the cosmogony of the Brahmins was founded. It was taught by some of the Greeks, and it was hinted at in the pantheism of Spinoza. But to deny to Mr. Spencer the entire credit for the conception would be equivalent to denying to Dalton the entire credit for the atomistic theory because it was taught

by Democritus in the eightieth Olympiad. The conception of evolution and dissolution is as old as history, but undoubtedly it was original with Mr. Spencer. It is a conception which he alone has wrought out with the implements of science. He alone has placed that conception upon a basis of solid fact and, by his exposition of it, has forced a readjustment of scientific thought. In his hands it has altered the methods of education in every civilized land; and if it is now common property it is only because Mr. Spencer has made it common property.

Our object is neither to criticise nor propound the philosophy of evolution. We have rather to consider the phenomena of social life in so far as we can discover under what law they may be grouped, in what direction the motions set up by the forces at work are tending, and with what safety we may predict the final effect of the activities we see. In doing this we shall be constructing a theory which, if it shall prove to be true, shall add measurably to the quantity of knowledge which man possesses about himself. We shall endeavor to arrive at a generalization in which may be broadly expressed the nature of the causes of social action, the mode in which these causes operate among themselves, and the product which springs from these activities. Again we beg the patience of the reader in following us along familiar paths, and in considering with us familiar truths. It is only by this method we can arrive at our much desired goal. Familiar facts assume new importance when relations between them, unperceived before, are brought into view. If the structure we hope to build is to be enduring, it must rest on the sure foundations

which are already laid. And a knowledge of the ground-plan of those foundations is necessary to a comprehension of the harmony in the superstructure.

The only good method of forming a theory of social evolution will be to discover, first, the proximate purpose toward which all social motions are directed; then to understand the means by which these motions are carried forward, and lastly to determine the state of society when that purpose shall have been wrought out. It should be clear that if we can accurately ascertain the first and the second of these desiderata, we can certainly form a more or less accurate conception of the third. Speculation which takes no account of the commonplace needs of men, or neglects to keep close to the means by which these needs are supplied, must always be wide of the mark. And we shall see that if we are to arrive at a conclusion which shall satisfy our highest conceptions of man's place in the scheme of things universal, we can come to it only by a consideration of the entire structure of man in all his aspects. Out of the play of the forces supplying the vulgar wants of the human body, and gratifying desires deemed base by some, may arise a social structure of surpassing beauty and of proportions appealing to the highest ideals of justice, of spirituality, and of aspiration.

To use a trite metaphor, we do not commonly despise a rose because its roots are to be found in dirt; we rather the more admire the rose when we come to trace the stages of its growth, the intimate process by which it gathers its exquisite colors, and the manner in which it reproduces itself with each returning summer. When we learn that pity and love

—the two most exquisitely beautiful and tender sentiments of a noble humanity — are sprung even from the reek of shambles, and from the passionately cruel instincts of life, we can but all the more wonder at the perfection of that beauty and the beauty of that tenderness. When we learn that man, from the ruin of countless lives, and from sorrow inconceivable, has plucked the secret of life without stint and of joy without stay, we can contemplate the ages, if not with a smile of serenity, at least without a shudder of pain.

CHAPTER III

ORGANISM AND ENVIRONMENT

AN inquiry into the methods of social action will be greatly simplified if we conceive of society as an organism, surrounded by an environment, and subject to certain changes caused by the forces of environment acting upon the plastic substance of the organism itself.

This is an idea familiar to observers of social life ever since the advent of the development theory, as first propounded by Darwin and Wallace, and enlarged, more or less, by subsequent investigators. Analogy of the body social to the individual organism has been carried very far by some writers. The conception is very alluring at first sight and has led many scholars into flights of fancy condemned by cautious critics. While these latter admit that the analogy is close, they hold that there is no warrant for the belief that society, in its general structure and function, is really an organism in the sense that the body of a living creature is an organism. But even if we admit the force of this distinction, we are still perfectly certain that society is an organized whole, composed of various structures, each of which has its functions, and each of which acts coördinately with the other organs making up the entire social body.

This conception of society is not only perfectly rational but perfectly true. It simply takes into account that social division of labor which corresponds with the physiological division of labor seen in all living things from the simplest up to the most complex. There is organization of the highest kind in government, and in those institutions which carry on the commercial, educational, and industrial business of a community. But this will be admitted by everybody. It will be admitted, too, that the movements of a social organism, and its form, are largely affected by the environment by which it is surrounded. Climate, the food supply, the natural mineral wealth of the locality in which it lives, the agricultural possibilities of the soil, and the character, or strength, of contiguous communities—all have an important effect upon a social group. These determine the nature of its industries, its degree of prosperity, the number of its population, the state of its general intelligence, and its power as a member of the great family of nations of which human society is constituted. There are other factors to be taken into consideration, but with these we need not at present concern ourselves.

Now if we look more carefully into the movements of a social group, we shall observe that these movements are of a purely *mechanical* nature. We must not here fall into the error of supposing that these motions are only *analogous* to the actions of a machine. They are as really and truly mechanical as those of a printing-press or a steam engine. This is true not only of a group of living things, but of every individual living organism as well. The statement is not at all a figure of speech or a conception of the

fancy or of the imagination. It is a positive fact. All living organisms are mechanisms, and their action is purely mechanical. This truth is all-inclusive. It applies to the simplest and the lowest order of living creatures as well as to the highest. A common cell — the unit by which all living bodies are built up — is itself a machine; and not so simple a machine as was at first believed. The discovery of this important fact has caused a profound modification in very recent years of the views of biologists with respect to the origin of life. The body of a man is as purely a mechanical structure as is a printing-press or a watch. True, it is vastly more complicated than either of these devices, but the principles upon which it is constructed are of the same kind as those upon which a watch or a printing-press is built.

But between living machines, or organisms, and all human devices there are important differences. The structure of a living machine responds in peculiar ways to certain changes effected in the environment about it, while that of an artificial machine does not. Then, again, one of the functions of living machines, and some other natural machines, not supposed to be alive, is the reproduction of other machines just like themselves in all important particulars; a function which no artificial machine is observed to possess. Otherwise stated, the natural machine, whether it be living or not, presents the phenomenon of *growth* — either growth with reproduction, or growth without it. In other respects the likeness between the natural and the artificial machine is very close.

The progress from the simplest kind of a mechanical device made by man up to the most complicated

one, consists only in the increase of the number of parts, and their mutual bearings when the machine is set in motion. A common domestic coffee-mill consists of only five or six parts, whereas a clock consists of many more. And between an ordinary clock and one which shows the year, month, day, hour, minute, and second, the phases of the moon, the seasons, and enacts with puppets the drama of the death of Christ, the difference is very great indeed. But such difference lies only in the multiplicity of the parts of the clock and the functions pertaining to these parts. More complex still is the machinery used in the manufacture of fine watches, and in numerous other branches of industry. Of a precisely similar nature are the differences between the mechanical contrivances made by natural forces. From an amœba up to a man, there is seen, in the various classes of animals that lie between these extremes, only an increasingly large number of parts with correspondingly complex functions.

The mechanical nature of the movements of living organisms includes *all* the movements of the organism. The action of the internal organs with relation to one another—which constitute what we call vital processes—are purely mechanical, and the same is true of the actions of the organism as an united whole with relation to the things surrounding it which, for the sake of brevity, have been called its environment. If we are to conceive society as an organism, we are compelled to extend to its movements—and to all of its movements—this mechanical principle of action. And this extension will be found to be perfectly rational and perfectly true when we

take up the various structures of which society is composed, their movements within the body of society itself, and the movements of that body with relation to the environment by which it is surrounded. We shall find, too, that societies grow more complex just as do individual organisms, and that the differences between societies are precisely the same as the differences between the individual machines — some are more complex than others, having many more parts; some are more powerful, some more plastic, some capable of more intricate movements, both with concern to internal organs and with concern to environment; but that the movements of all are the same in kind.

It is hardly necessary here to dwell upon the theory of natural selection. In its general principles it is so well understood, now, by all cultured people, that a mere reference to it by name should be sufficient to connote the facts which the present discussion of social evolution accepts as proved. Yet some little time must be spent in the consideration of this subject, for it is not everybody who is interested in social questions that comprehends even the outlines of Darwin's scheme. Still less does everybody who considers himself competent to pass judgment upon the needs of society understand the very vital connection that exists between social phenomena and the purely physical functions of individual men. We cannot too emphatically insist upon this necessity of always associating the social process with the vital process. It is pure waste of time and energy for any man, or party of men, to attempt to understand the principles of social action

without first understanding the principles of individual action. Among scientific men, this is an axiomatic truth.

But all are not scientific men. The very great majority of persons who are most actively engaged in the work of social reform are far from "scientific." Their "studies" consist largely in the observation of persons afflicted with poverty or vice, and in the discussion of methods of improving the minds of the "lower classes." They are only remotely interested, if at all, in the intimate movements of the cells of the brain, the development of a mature organism from the egg, or the causes which produce the very "evils" which they seek to remove. They can never hope to learn why the "lower classes" are poor, why men indulge in destructive intemperance, why theft and murder are commonplace, and why a few men have a superfluity of wealth, while the many have only a dearth, until they have learned the methods by which the individual organism acts, and hence the social. We will admit that it is not necessary that they *should* understand these causes in order to work out some of the changes they desire. But we must insist that they can never form a rational conception of what social life actually means, and to what end it is tending, until they acquaint themselves with causes the effects of which they are striving so earnestly to alter.

For the sake of driving this point home, let us enlarge upon an illustration suggested in the preceding chapter. Until recent years epidemics of Asiatic cholera were more or less frequent in Europe and even in America. Men were powerless before the

onward sweep of this destructive disease. They knew that it was communicated from one person to another, and from one country to another. They knew that a plague of cholera was more to be dreaded than conflagrations which destroyed whole cities; than failures of crops; than bloody wars or revolutions. They knew and fully realized with what devastation, and with what horror, an epidemic of cholera overran the world. But what could they do to prevent it? Nothing. They were helpless and hopeless so long as they were in ignorance of the *cause* of cholera, and the method by which it was propagated. Meetings of legislatures, the prayers of common men and of ecclesiastical officials, the edicts of kings, and the offices of physicians were swept aside by cholera as wisps of straw in a mighty flame. Legislators, kings, priests, physicians, and nurses were one and all themselves ridden by the plague.

But all these things were quickly changed when it was discovered that cholera was caused by the presence in the intestines of a microscopic vegetable germ; that this germ could be communicated only by passing through the mouth of a human being into his stomach and bowels; that the usual vehicle for this communication was water; that by boiling the water the power of the germ to multiply itself was removed; and that if the food and hands of nurses and physicians were carefully sterilized, they would be immune from the disease. At the very first opportunity of fighting cholera with these instruments, the disease was stopped at its source in Europe, and what had been a plague on two continents before

that discovery was made, was confined to comparatively few cases at its first appearance, and was stamped out in the following year. Patients with cholera in the city of Hamburg were treated and nursed by physicians and attendants who were perfectly fearless of contagion and whom the disease did not touch. Students flocked to Germany from many parts of the world to study the symptoms of the disease in the assurance of perfect security. And if any human being *now* wishes to escape cholera all he need do is to sterilize his food.

But is not the present state of men, with concern to those evils of which they so bitterly complain, very much the same as was that of Europe with concern to cholera before the discovery of the *comma bacillus* by Koch? Is it not clear that a savage who knew nothing of the laws of optics, who had never seen a microscope, and who was hence totally ignorant of the germ theory of disease, could not possibly understand how to prevent cholera by means of sterilization? Yet almost all the reformers are quite as ignorant of the causes of social suffering as were Europeans of the eighteenth century of the causes of the Asiatic plague. This digression will not have been without its intended effect if it shall have emphasized the necessity of comprehending the relations of the organism to the environment in all studies which aim to clear up social problems.

The theory of natural selection explains the differences we see in species by pointing out the effect of inheritance and adaptation upon the plastic bodies of living mechanisms. All animals tend to vary from their parents in some slight particulars. Variations

useful to the organism have been preserved and developed by natural selection, until we see in the accumulation of effects the most divergent types. It is not so much that nature preserves those that are best fitted to survive, as that it eliminates those that are not so fitted. Spencer's famous phrase, "Survival of the Fittest" has been therefore recently amended to "Elimination of the Unfit." The organism which can best adapt itself to its surroundings is the organism which will thrive best in those surroundings. This truth is self-evident. The degree in which the organism may have been developed has nothing to do with the question. The strongest or the weakest, the craftiest or the most stupid animal, may be the one which can best live in any particular environment, and that is the animal that survives. All others must perish. *Fitness* has reference only to the surroundings in which the animal is forced to live. The American sage-brush grows with exuberant vigor and astonishing fecundity on dry, alkaline deserts where an attempt to raise wheat or oranges would fail. A human being, no matter how intelligent or ingenious, could not exist in circumstances which favor the growth and multiplication of sharks or of crocodiles.

How nearly the nature of the environment concerns the well-being of an organism is seen at once when the environment is changed. If the change be great, the sufferings of the organism are correspondingly severe. When the extreme opposite of the environment in which an organism thrives is substituted for the favorable one, the animal dies. Plunge the air-breathing animal into water, or place it under

a receiver and exhaust the atmosphere, and death ensues. Remove a fish from water, and the same effect is seen. Between the extremes are all degrees of pain and comfort, loss and thrift.

Organisms depend upon two forces, broadly speaking, for their ability to thrive in any special environment. These are, first, the physical characters they inherit from their parents, and, secondly, their power of adapting themselves to the conditions under which they are forced to live. Let us take, for example, the familiar illustration of the deer. These animals are proverbial for their keen sense of hearing and their great fleetness of foot. Among a race of deer living in a locality with predacious beasts which used deer for food, it is plain that the animals which had been born with a little keener sense of hearing than the others would be most likely to escape their enemies, and to reproduce their kind. Among the surviving deer, those which had been favored with superior fleetness would probably escape in larger numbers than their less fleet fellows, and go on propagating, while the slower animals would be eliminated by the carnivora. This process, by countless repetitions, would in time produce the very high state in which we at present find these two characters among deer.

Such is the part played by inheritance in the development of species. Let us now suppose that a number of deer are forced into an environment in which the ground is covered with snow for the major part of the year. While there may be sufficient vegetation under the snow to serve as food for the deer, yet were they unable to secure it, the race must inevi-

tably die. But if we suppose that some of the deer discover that, by scraping the snow with their feet, they can find edible mosses, it is clear that those individuals which take advantage of that discovery will survive. Furthermore, those which will most readily acquire skill in locating the mosses will be the most favored. The young of every generation will be taught the practice, and will acquire certain characters in the form of the muscles of the leg, and in the form of the foot, distinguishing the race from other groups of the genus *Cervus*. In this manner the power of *adaptation* to the environment enables those individuals who possess it to survive and propagate, while those who lack that power must perish.

The question of the transmission of acquired characters is at the present time in some dispute among zoölogists. Darwin himself fully believed that these characters were transmitted. Wallace, who advanced the theory of natural selection simultaneously with Darwin and independently of him, also holds the opinion that the characters so acquired are transmitted to offspring. Other naturalists follow the great originals and support their views with ingenious arguments. The contrary opinion is maintained by August Weismann, the German biologist, and his school, who believe that no acquired character is ever transmitted, but that variation and inheritance are alone used by natural selection in the transmutation of species. The merits of this dispute have little to do with the present phase of our subject. It may be well to state here that Weismann's theory is as yet unproved and that it would be unwise to draw from it any general conclusions concerning human

society. We are convinced, moreover, that the prime importance attached to this theory with concern to society is needless, and perhaps unscientifically exaggerated by many biologists. As this theory is constantly and insistently brought forward by zoölogists as having, if true, the most vital influence on social evolution, we must not dismiss it without some examination of these claims.

According to Weismann, acquired characters are not transmitted. Thus, if a man is not born with an appetite for alcohol he cannot transmit it to his offspring. He may acquire a strong appetite for drink in his youth, live his whole life long a slave to it, and yet beget children who will in no wise inherit the desire. On the contrary, should the desire for alcohol be inborn in him, nothing he can do can prevent his children from having the desire themselves. The parent may never indulge the appetite. He may never have even tasted an alcoholic mixture. Yet his children must inherit the desire, and no power can interfere. The same may be said of all other characters of men, whether good or bad, physical or mental.

Upon superficial examination, this may seem to be indeed a most important consideration. If it be *true*, it has been said, there is small hope for mankind. If men with the innate instincts of murderers, thieves, sensualists, and drunkards, are to pass down to posterity the worst traits of their nature, what can be done to reform the world? If, on the other hand, the results of generations of right living by individual members of society are really *nil*, and count as nothing in the formation of the characters which are to

mark posterity, what assurance have we that society will retain for any length of time the effects which have been wrought out by centuries of progress? It has been suggested as an answer to these questions that if care be taken in the mating of human beings, the characters of the offspring can be determined. That if individuals so select their mates as to prevent propagation by persons who inherit undesirable characters, these characters will soon be eliminated.

But how are men to know what characters are inherited and what acquired? The hopeless inebriate, the thief, the sensualist, or the murderer, may be far more desirable for purposes of propagation than the individual whose conduct is without flaw of any kind. For the one may have *acquired* these characters, and will beget offspring totally devoid of them; while the other may have inherited them and, although prevented by circumstances from disclosing them, may pass them down in full force to his children. So long as the total sum of vicious propensity remains constant in the human race, there can be no assurance that the race has really improved in the past, or can be brought to real improvement in the future. The only method by which the race could be improved — if Weismann's theory be true — is the very method which contains within itself the elements of the highest uncertainty and danger. For the only method we have of judging whether or not undesirable characters be inherited, is their actual presence in the individual. If they are plainly present, there is no evidence they are not really acquired.

But while Weismann's theory holds that acquired characters are not transmitted, it holds also that

variation would tend to eliminate unfit characters. For example, among a race of men with inherited appetites for alcohol, would appear now and then certain individuals with tendencies in the opposite direction. These might be seized upon by natural selection and, in time, supplant those with an inherited tendency to intemperance. It should be remembered that we are here engaged in applying the Weismannic theory to human society. Weismann himself did not so apply it, so far as we know. It would not be necessary to discuss it at all, were it not that numerous writers have attempted to show how very important it is in all considerations of social life. That this importance has been grossly exaggerated we have already remarked; that it is needlessly so exaggerated, will, we think, become clear upon a closer examination.

Let us admit that this theory is true. There is little enough warrant for the admission, but let us admit it. Does it follow that mankind — or at least the civilized part of mankind — is necessarily doomed to a return to the savagery of its ancestors, or that there is cause for apprehension of a reversal of progress and the decay of civilization? Is there any adequate reason why we should live in dread of the undoing of civilization because men inherit characters undesirable and destructive to social progress? For answer let us turn to the theory itself.

Acquired characters — according to Weismann and to the school of Darwin and Wallace also — are essentially the product of environment. The arm of the tennis player and the blacksmith, the muscular characters of the human leg, the atrophied organs

of certain parasitic crabs, the shape of the skull in Choctaw Indians, the dwarfed foot of the Chinese woman, the differences between members of the same species of fruits growing in different climates, are all acquired characters. By changing the environment the most striking changes in characters may be produced in the plastic substance of animal and vegetable organisms. The environment, as we have seen, may be altered so as to produce death. The very power possessed by an organism of producing acquired characters by adaptation to environment is often the cause of survival. And continued survival depends upon the continuous adaptation of new generations, as in the case of the reindeer, which has been used as a more or less fanciful illustration of the operation of natural selection in the preservation and development of species.

If, now, we apply this conception of acquired characters to human society, we shall find that the environment plays just as important a part there as it does among lower organisms. When we speak of the struggle for existence among men, we do not mean precisely what is meant by the same phrase as applied to other living beings. Among the latter the struggle is really one of life and death. The unfit are *eliminated*; that is, they die before they can propagate. Among men, as between themselves, there is really no struggle of this kind. Few men die of starvation. Sufficiently large numbers of individuals survive to maintain the race. Indeed, the total population of the world is constantly increasing. The struggle between men is not really a fight for life itself and its propagation, but rather for possession

of larger means of gratifying the desires which grow out of the satisfaction derived from the functions of living. If we replace the phrase "struggle for existence" with that of "struggle for *ampler* existence," we shall more nearly describe the process going on among the integers of human society.

There *is* a real struggle for existence going on between men and other races, but the struggle has no all-important effect on the propagation of the human race. Millions of human beings die every year as victims to organisms which feed upon the human body. The majority of individuals born are eliminated before they reach the age at which they can propagate. Others are destroyed for food, after they have passed the age of propagation, by micro-organisms, the presence of which in the human body has been called *disease*. But we can minimize the importance of this struggle because it has really no effect upon the existence of the human race. In spite of it, the human race progresses numerically—especially in civilized countries, where much has been done to prevent the propagation in men's bodies of those races of micro-organisms which live upon man, and destroy his life in the process. Apart, then, from the struggle of the human race with these microscopic organisms, there is no struggle for existence for very life itself among men. Man, as a race, is the most powerful animal known.

But, if this is true, it is true because man's environment has had a far-reaching effect upon him both as an individual and as a race. Whatever may have been his inherited characters, the environment has so shaped them as to produce the civilization we now

see. If the head of a human being can be moulded into a shape different from that of the normal, thus producing an acquired character of a striking kind, inherited tendencies of mind can be moulded so as to produce mental characters very different from the so-called natural ones. It is purely a question of environment. We can admit the Weismannic theory, and yet hold that all the characters which distinguish the modern civilized man from the ancients are acquired. But when we see that acquired characters have changed the entire face of civilization, and have so dominated inherited characters that the latter, when disclosed, tend to destroy the individual who possesses them, the importance of acquired characters becomes prime. Let us admit that all men inherit a desire to kill and to rob. Is it not nevertheless certain that these inherited characters are practically eliminated in most civilized men by the acquired characters of sympathy and honesty?

Let us admit that the citizen of London is to-day born with the same characters which distinguished the Roman citizen of two thousand years ago. Does it follow that London citizens are therefore liable to build a colosseum and produce gladiatorial spectacles in which prisoners of war are forced to kill one another? Or that a monarch such as Domitian or Nero could for a moment exist in Europe or America? Bear-baiting was common in England a few centuries ago. It is indifferent whether the practice was abolished, as some claim, not because of sympathy with the bear, but because of the desecration of the Sabbath! Bear-baiting would not be permitted to-day in England *because public sympathy*

would stop it. The common belief is that it was forbidden because public sympathy was shocked by the practice.

Whether acquired characters are transmitted or not is a matter of absolute indifference, when undesirable inherited characters are minimized, or apparently eliminated, by those which are acquired. The man born without sympathy can, as we know by force of training—and training is environment—be brought to a state of mind which shudders at the bare thought of cruelty. If sympathy be an acquired character, then all the other social characters which distinguish civilized men from savages are also acquired. We can admit that the ancient Romans were born with the same propensities as men of to-day. We know that parasitic crabs are born with organs fully developed. But the life of the crab depends upon the adjustment of its organs to its parasitic environment. Its inherited characters must be overcome by its acquired characters, or it must die. And it is much the same with men.

Too much caution cannot be exercised in applying the Weismannic theory to human society. Wildly to leap at conclusions in this respect will be found to lead one to very absurd positions. Much of the writings of biologists, and others, who so apply that theory are suggestive of the imaginary character of the premises dealt with. It is very easy to discuss "inherited appetite for alcohol." But it is not so easy to prove that any such appetite exists, or to show how it was produced, except on the theory that acquired characters *are* transmitted. And with this admission all discussion of Weismann's theory vanishes.

It will be admitted that no man could inherit an appetite for alcohol before the production of alcohol by artificial means. He might be born with nervous and alimentary variations which would respond readily to stimuli of a peculiar nature; but this character is not only common to all men but to all other living things. The appetite for alcohol is in no wise different, in its causes, from the appetite for tea or coffee. These substances are all intimately associated with nutrition. It is about as pertinent to the subject to discuss with gravity the *inherited* appetite of men for bread, or the *acquired* appetite of men for curry or cayenne pepper. The susceptibility of the nervous apparatus to stimuli in general has an important bearing on *all* appetites, and every high organism is born with that susceptibility more or less emphasized. Among the Chinese, from whom the appetite for alcohol is notably absent, there is a very pronounced appetite for opium. And if we are to say that such desires are inherited, we must classify them with the universal desire for food which is found in all living creatures.

We are not aware that Weismann carried his theory to the extent of applying it to social evolution, as has been done by some who have accepted it in its biological significance, and by others who, while not finally accepting it, have indulged in speculation as to how it will work when social evolution is tested by its assumptions. But we are at no loss to see how readily the theory may be used for the drawing of absurd conclusions, when it is carried into the realm of social life. The sequel will show, we believe, that there is no occasion for allowing Weismann's theory

to interfere with a serene contemplation of the future of man. Even if it be true, it is yet clear that inherited characters of mind may be changed by environmental forces as much as the skull of a Choctaw or the foot of a Chinese woman. And unless we can conceive of some process by which a community of Choctaws could, by an effort of the will, suddenly resume the ancestral form of the skull, we can conceive of no sudden disappearance of the acquired flatness. Furthermore, unless we can conceive of the disappearance of the motive for pressing flat the skulls of newly born Choctaws, we cannot conceive of a new generation suddenly appearing with skulls of the unaltered type. If men born with murderous instincts can be moulded into men of tender sympathies, we cannot conceive of a race of murderers being produced, except by the removal of the motive which compels men to shape the minds of their offspring as the Choctaw shapes the skull of his.

It will not be pressing the analogy between the individual, as an organism, and society as such, when we point out the similarity in the methods of action by which both are sustained. The conduct of an individual who finds himself in a painful situation is explained only on mechanical principles. The truth of this assertion is no derogation to the dignity of man. The granting that man's actions are as purely mechanical as are those of a frog or of a watch, by no means reduces him to the level of a frog or a watch. Those who so contend are merely shallow thinkers. On the same principle they could contend that because man is a true mammal, he is therefore no better than a porpoise or a hippopotamus; and

that because he is a true vertebrate, he is no higher in the scale of creation than a snake. But apart from any and all such absurd conclusions, there is no question that all the actions of an individual man are mechanical. His environment, his relations to his environment, and his structure, are infinitely more complex than those of any other organism known, but that is the only difference we can discover. Yet that difference is by no means so easily understood as many uncultured persons believe.

The mechanical nature of the movements of society has long been acknowledged by the usages of ordinary speech. The word "mechanism" is commonly applied to those organs of society used by society to maintain its integrity. Many of the mechanisms arise naturally, and are manifestly as much the product of purely natural forces as are the organs of an animal, or the color of the human skin. These we will presently consider in some detail. At present we may glance at social mechanisms which seem to be the pure invention of men.

In civilized states are found numerous apparatuses used in the work of government. A legislature is nothing more or less than a complicated machine, composed of several parts acting in coördination. It has a process of action and a product of action. Its chairman, its clerk, its various committees, all have specific labors to perform, and these labors are performed always in the same way. The method of the action of a legislature is invariable, and is determined by "rules" made by its creators. The intention of its creators is always to insure perfect regularity in the movements of the creature. The products of the

action of a legislature can be predicted with as much certainty as can the products of the machinery in a shoe factory. So long as the legislative mechanism performs the function for which its structure was built, the product of that function will be invariably a *law*. There may be infinite diversity in the laws thus produced, but all these laws must be produced by the same mechanical method.

A legislature is probably the most important part of the entire machinery of a government—at least of a government more or less democratic. The word “machinery” is not here used in a metaphorical sense at all. If we rightly designate a locomotive by the word “machine,” we must use the word in a literal sense when we apply it to instruments composed of men, and used for the enforcement of its will by a state. What has been said of a legislature may be said of every other organ devised by states for the enforcement of laws. The mechanical nature of a judiciary, which, while it may seem to be a device of free and arbitrary invention, is really no such thing, will not be disputed; while the police (and we include armies and navies in this category) are proverbially the most striking examples of governmental mechanisms. Now the perfection of these instruments must obviously depend upon the ingenuity possessed by their creators to construct a machine which will answer the needs of the state using it. Of a necessity some states will have constructed more efficient instruments than other states. And even within the confines of one state there may be found degrees of efficiency in the various organs invented by it for the purpose of preserving internal peace and defend-

ing the state from enemies without. As examples we may cite, on the one hand, representative legislation and trial by jury, and, on the other, the invention of the Roman legion, which replaced the Macedonian phalanx, and which has survived in the regiment of the modern army. The Roman legion was found to be a far more efficient machine for purposes of war than was the phalanx invented by Alexander. Representative legislation and trial by jury can hardly be compared with absolute monarchy and bench-made law as mechanisms for the satisfactory administration of justice in enlightened states.

Other institutions by which the will of a community is carried out, and common needs answered, are quite as mechanical as are governmental institutions. But the purely natural origin of these is somewhat more manifestly evident than that of their political congeners, although, in reality, there is no more of artificial origin or construction in the one than in the other. This natural origin is especially manifest in the mechanism of *exchange*, whereby the things produced by men's labor are distributed among those who create them. The methods by which goods are circulated are much the same in all parts of the world, and have not changed within time which is measurable by history. Before they can be distributed, goods must be brought to some central place from which they are issued to consumers. A section of country in which agriculture is practised, pours its products into a locality most available for the easy distribution of those products, and most easily accessible to the producer and the consumer alike. A locality in which manufactures flourish sends its

goods to other centres most easily accessible to the manufacturer, and to those who demand his products. A centre used for the collection and circulation of goods in this way is called a *market*. This flux and reflux of the things created by human labor is called *trade*. The process by which each individual secures the particular things he desires, by the surrender of things which he produces, is called *exchange*. It will be observed that the nature of this process is as purely mechanical as any phenomenon in nature. The flow of goods to a market is as necessary, in the very nature of the purpose to be served, as the flow of a stream to the sea, or the movements of the parts of a locomotive when they are assembled in the machine and power applied. No less mechanical are the processes derived from the primary process of exchange, such as are to be found in the very complicated structure known as the mechanism of finance. It will be observed, too, that the purpose is more efficiently served as the instruments approach mechanical perfection.

Thus, in its political and economic life, is society seen to be a machine; and we are led to the conclusion that social action is mechanical in all other respects. This should not be a startling conclusion when we remember how very mechanical are the actions of individual men, and how well society is served by the instruments which nature and art have given it for its two necessary functions of government and economy.

It may be objected that the conclusion is sweeping; that there are social actions which cannot be classified as mechanical. For example, the practice of

medicine. Physicians, it may be said, while they have organized societies for the advancement of their art, do not practise that art in any organized manner. The great body of physicians consists of discrete units operating independently of one another. Each individual acts separately from all the others, and there is no united effort by which a product is made, and wherein is seen the sum of the common activity. But this objection vanishes when we consider that the acts of the individual physician are precisely like the acts of producers of commodities who convey their goods to a market. The skill of a physician is, in fact, a commodity, and, as with goods of other kinds, the best skill can be found in the markets where the demand is most brisk.

In small markets we can see the mechanical nature of exchange more manifestly shown than in great markets where complexity of function and structure are apt to obscure it. To Nijni Novgorod merchants fetch their commodities, expose them for sale, and exchange them without any particular relations to each other, except in so far as the determination of price is concerned. Every merchant there is perfectly independent of every other merchant save in this one respect. And there is no difference between Nijni Novgorod and London, as markets, except that the one is small and transitory, and the other large and permanent. But if we admit that exchange of goods is carried on by a mechanical process, we must admit also that the actions of the medical profession are of the same kind. For physicians, although discrete in their functions, are only fetching their skill to a market, there to exchange it for other utilities. In this process their re-

lations to one another are precisely the same as those of merchants in a market for pure trade. These relations determine the price at which medical skill is sold, and are as purely economic as those of competing venders of commodities. The physician is himself the product of a school which, like other institutions for purposes of education, is a machine in the true sense.

What is true of the medical profession is true of all professions. It may appear that the sum of the actions of those who carry on scientific investigations cannot be classified with that of merchants, educators, artists, physicians, actors, clergymen, and other servants who give their services in exchange for economic utilities. Yet the principle of utility dominates the actions of most scientific men. These earn their livelihood by the special work they do. But even if we were to make an exception of them, and say that they are all pure amateurs, yet the general process of scientific research will be seen to be necessarily mechanical. Every investigator in a special line is merely producing a part—and almost always a very small part—of a structure which is arising slowly in response to united effort. The relations of these investigators are as intimate as those of the various craftsmen who construct a printing-press or a house. Thus we see that all social actions, whether arising from motives of politics, economy, religion, education, art, or science, are performed by instruments or organizations mechanical in their nature. Given the structure of the machine which is to do the work of society, and it can do it only in one way. A legislature, a great market, an university, a church, a theatre,

a factory, a farm, are all examples of social machines and such illustrations can be extended *ad libitum*.

At the bottom of these interesting facts lies the major fact that society, as an integrated whole, is *itself* a mechanical structure, of which the various processes and structures we have been considering are but parts. To conceive of a great nation as a machine, operating on principles like those which are observed in the operations of a steamship driven through the water, is no more difficult than to conceive of a legislature, an army, or a market, in the same way. That it does so operate there is no room for the slightest doubt. In the major statement that all organisms are machines, is included the minor statement that society is a machine, and there is no more derogation of the dignity of man in that assertion than there is derogation of the dignity of an individual man in the assertion that he masticates, digests, and assimilates his food, and propagates his kind, in precisely the same manner as does a gorilla. The gorilla, himself, is not without some measure of dignity when he is compared with the marmoset, while the latter is a very important creature when he is set over against the rat. Yet all of these creatures, from man to rat, are mammals.

Let us now consider society in relation to its environment. At the threshold of this inquiry we must not forget what has been said of the general structure and function of man's body. Man's body has been well moulded to the environment in which it lives, and little change is conceivable in that structure as the effect of any conceivable change in the surroundings. We are at liberty to imagine *some* change in structure,

and no end of increased exercise of many of the structures already possessed by individuals, and from these changes many new characters may arise. These will be brought about by changes in the environment made inevitable by progress; but that such changes may produce a new species of men is impossible to conceive.

But this is by no means true of society. Social changes are going on with great rapidity, and have been going on since history began to record human events, and for ages before that time. If Plato and Aristotle were organically much the same in body and mind as are civilized men to-day, the society in which these philosophers lived was a very different thing from the society of the present time. The principal boast of civilization is found in the comparison made of the present state of society with that of the nations of antiquity, and with even the state of men a few centuries, or a few generations ago. We are accustomed with much pride to point to our grandfathers and their institutions and to pity their backwardness as compared with our own forward state. This has been a favorite occupation with men ever since the "renaissance" of learning in Europe. And if the comparison could be made with effect one or two centuries ago, with what more heightened effect may it not be made now? For the state of society in ancient times we can express but a feeling of curiosity as to how it was possible for men with such very high conceptions to have lived in such surroundings at all. To ask wherein consists the difference between the state of the highest civilization in ancient times and the highest civilization of the present, is to

suggest the entire history of human progress. There can be no question that this progress is a fact. Our desire here is to show its *cause*.

When we analytically compare the state of European society of say two thousand years ago with that of the present, we find that the differences are environmental; or, to state the proposition more in particular, that the differences are environmental *plus* the changes in the organism which have accompanied such alterations in the surroundings. There should be no misconception as to what is meant by the word environment. Using the word in its widest meaning, the environment of man is the entire universe, visible and invisible, except that part of it which consists of man himself. This is the only *anthropocentric* idea which is perfectly true. So far as human society is concerned, man is truly the *centre of all things*.

It is difficult to place a limit upon the effects which remotely distant bodies may have on the lives of men in the most commonplace affairs. For example, the discovery that the earth and the other planets were satellites of the sun, led to the most important changes in the customs and laws of European nations; changes which are admittedly the results of the intellectual advancement of which their discovery was one efficient cause. But while it is true that no part of the universe can be omitted from a definition of environment, that part of it which is nearest to man, that is, the earth and the material things with which man comes into contact, has the most immediate and far-reaching effects upon the organism called society.

The term environment does not alone embrace the physiographical or geophysical surroundings of

society. These may have undergone but slight changes ; yet the environment, as a whole, may have been altered profoundly. The physiographical surroundings of Rome are very little different from what they were in the time of the Cæsars. There are the same hills, the same river, the same climate, and, possibly, much the same vegetation in the vicinity of Rome to-day as when Jupiter Optimus was worshipped on the Capitoline Hill. Many of the ancient buildings of the Romans still survive in various states of preservation and decay. Yet the environment of Rome has been altered beyond the dreams of the most intelligent of Roman citizens who lived in the time of the Cæsars.

Modern Romans are surrounded by an environment of which the printing-press and its products, all the results flowing from the application of steam power, the electric telegraph, and every other concrete achievement of science, form a part. If modern Romans are incapable of enjoying the atrocious sports of the Flavian amphitheatre, — the mighty structure of which still stands to remind them of the social state of their predecessors, — it is only because their environment has so changed as to make such practices impossible. In that same Rome, but four centuries ago, Giordano Bruno was publicly burned for assailing the dogmas of the Roman Church. Bruno could not be burned to-day because the environment of Europe, — the innumerable discoveries and inventions of science, — has so altered the ideas of men that they are taught from their childhood to look with horror upon the cruelties of their ancestors. Bruno's fellow-men, or the majority of them, were

more deeply shocked by Bruno's doctrines than they were by the manner of the death of that philosopher. They were shocked by the doctrines of Galilei, who, if he did not suffer Bruno's fate, was nevertheless severely punished for the publication of discoveries to be ignorant of which is to-day a matter for commiseration.

All of this is easily understood when we remember that the Rome of the Sixteenth Century reflected, in its religious, moral, and political state, the state of the environment by which it was hedged. Since that time the railroad and the telegraph have bound the countries of Europe together in closest contact; observatories have been built from which are seen the movements of distant suns; microscopes and spectroscopes have separated the tissues of living animals and resolved the constituents of the stars; printing-presses have placed in the hands of children books which tell the story of Galilei and his inventions; ecclesiastical authority has been divorced from political authority, and government now encourages such discoveries as Galilei made and Bruno espoused. But government had been hardly able to do this had it not been for railroads and telegraphs, telescopes and microscopes, printing-presses and spectroscopes — and these things are *environment*.

In speaking of environment, therefore, while we need not leave out of account even the most distant bodies in space, we must necessarily attach the largest share of importance to those things which are intimately associated, in their spatial relations, with man and his economy. The sun and the stars are of course important enough, and even the moon has no

inconsiderable effect upon the activities of shipping. The alterations in human conduct flowing from alterations in men's moral nature made by the study of astronomy, are far more general than a superficial glance would seem to indicate. But, as we have seen in the preceding chapter, the study of astronomy is a derivation from the economic activities of men; and it is to be inferred that causes which shall account for fundamental changes in environment shall be inclusive of causes which account for environment in other aspects. To state the proposition in another form, we may say that intellectual environment arises out of economic environment, precisely as intellectual activity arises from economic activity. At the very time when the great Republic of Venice was laying the foundations of the modern banking system, and developing the mechanism of financial exchange, Galilei was building his telescopes and discovering spots on the sun.

With this definitive understanding of the meaning in which we use the word environment, we will proceed to examine the manner in which society has been changed by the forces of environment, and how it has been slowly fashioned from crude beginnings into the form in which we see it now. To this end we will presume that the reader is familiar with the results which have been achieved by the science of anthropology. The inquiry will carry us somewhat farther back than the nations of antiquity with which we have been made familiar by researches in history, in philology, and in archæology. We will find that comparative law will aid us largely to understand much of the variation through which society has suc-

cessively passed; and to indicate that the causes of the variation are found in successive new environments.

As we are dealing with man as a social animal only, we can dismiss discussion as to the origin of his characters in this respect. The long time required to prepare the human individual for a freely moving, independent life, in which he can in turn propagate the kind, necessitates the existence of the family. In remote ages parents educated their adult children to remain associated with the family group, and from the family group rapidly evolved the tribe. If, now, we wish to ascertain how the ancestors of the highly civilized nations of Europe lived in times which antedate history, and which transcend the power of philology and archæology, we have only to look about us and observe how savage peoples live to-day. By this method we can approach the neolithic ancestor of Europe in his cave, and learn much about the habits of the life of even *his* ancestor. But one more step is required to conduct us into the presence of that extremely savage man whom a little experience had taught the few highly valuable lessons which made him master of his fellow-creatures, and which have led his children, by slow and painful steps, up to the very high state in which we find them now.

In the life of any single organism, the struggle for food is made difficult or easy by its environment alone. If food exist in plenty and is easily accessible, the struggle is minimized, or vanishes altogether, and the efforts to secure nutritive substances become positively pleasurable. If the food be scarce, or less easy of access, the struggle is sharpened, although it

may still retain many pleasurable elements. As the sources of supply approach inaccessibility, the struggle becomes painful; and when food can no longer be found, or when it remains inaccessible, the organism must die, or remove itself to a new environment from which one or the other of these circumstances is absent. The environment of the individual organism, in what is called a "state of nature," consists not only of the plants and animals from which the organism obtains its food, but of the other individual organisms of the race to which it belongs. The environment of the separate groups of a race consists of all the surroundings (including other groups) which have a bearing upon the quantity and kind of food accessible to the common effort.

The occupation by which men living in communities, or tribes, secured their food, in primitive times, was that of hunting. Previously to the hunting stage it is probable that man lived upon vegetable food which was obtained from plants growing in abundance about him. With the discovery of fire came the knowledge that the flesh of other animals, when treated with fire, served as palatable and nutritious food, and thus the way was opened to a greater variety and larger quantity of available nutriment. Hunting, then, soon became the principal method by which the tribe supplied itself with the means of sustenance. The discovery of fire worked a most important change in environment, and from it flowed numerous new alterations, not the least of which was the improvement which must have inevitably followed in the implements which men used for battling with their enemies.

Whether or not the use of clubs for this purpose preceded or followed the discovery of fire, is quite indifferent. But that discovery must unquestionably have spurred invention to the creation of more efficient means of killing, not only natural enemies, but such animals, as well, as could serve for food. From utility as means of protection, or the passive preservation of life, to utility as means of actively securing sustentation, the change in the value of such implements was of the highest importance.

But the possession of fire gave man a double advantage over all other animals in the struggle for existence. Fire and the knowledge of its production is one of the oldest arts of men. No race has as yet been found which could not produce fire. The methods of its production differ but slightly in the most widely separated races, from the Eskimo to the African. The customs and superstitions pertaining to fire are among the most important in the religious practices and beliefs of all savage and of many semi-civilized races. The remains of these beliefs are seen in the most highly civilized peoples of the present time, where the word "hearthstone" connotes all that is held sacred in family associations.

It was found (1) that flame, which attached to itself an idea of the most intensely painful heat, not only served to render grateful the flesh of animals when dead, but to hold them at a safe distance when living; and (2) that, by means of fire, men were enabled to remove from one environment to another with a freedom not possessed before. With these important additions to their power over the environment, the range of tribes became practically unlimited. A tribe

whose supply of food was limited to the bounty of the vegetable world about it would, it is easy to conceive, be restricted to the localities in which the natural products of the soil were capable of yielding enough to sustain life. As soon as the tribe would acquire the use of fire, and of improved methods of hunting, by which the number of animals accessible for food would be enlarged, the mobility of the tribe would, as a consequence, increase, and the range of the tribe would extend. A knowledge of fire, and the invention of efficient hunting implements, could thus be conceived to change a race from one living in a tropical jungle to one inhabiting a country with an arctic climate.

These two inventions, which thus gave to man a twofold advantage over other creatures, produced a twofold effect upon the societies which possessed them. They not only caused communities to remain for a longer time in restricted environments, but they forced groups to separate from parent communities, and temporarily to establish themselves in localities far distant from that of their source. The tent had already arisen from the simple discovery that the skin of an animal, spread out upon poles, served as a useful shelter from the rain. And the hut had already developed from the screen, formed of branches fixed in the ground, as yet observed among Australians; or of large leaves arranged against a network of sticks, as found among the Indians of Brazil and among the Singhalese Veddahs. Thus the *fixed* habitation, and the *movable* habitation, accommodated themselves to the needs of tribes when the discovery of fire and improvements in implements of the hunt

left man free to wander abroad, or to remain for a longer time in a favorable locality.

These two forces lifted man immeasurably above his fellow-creatures only because they enabled him to *change his environment*. From that power accrued to man that unconquerable superiority which left almost all his enemies helpless before him. It was not to the fact that man possessed *hands* that he owed his mastery. It was because he used those hands to make an alteration in his environment. Once that this change was wrought, it was inevitable that all animals which could not, or which did not, effect a similar change, should fall in the conflict. The gorilla and the chimpanzee possess hands capable of doing much that is done by many races of men of the present time. Yet the gorilla does not make use of his hands as do men. It is true that the gorilla has not the intelligence of man. But it is not altogether a matter of intelligence. The gorilla uses his hands to some purpose when fighting his enemies, and if man is stronger than the gorilla, it is because man has been able so to change his environment as to place at his disposal instruments which the gorilla is not able to match with corresponding changes in his. Men, native to the locality in which the gorilla abides, fear that creature almost as much as he fears them.

But if we leave the gorilla out of the discussion, and confine ourselves to the human race itself, we find that there is as much difference in the strength of the most savage man and the most civilized as there is between the savage and the beast strongest beneath him. Why? Because the civilized man has

created an environment about him incalculably more complex than that of his ruder fellow. If the matter is to hinge upon the intellect, let us admit that all men are equal in that respect. Let us admit, for example, that American Indians, or the Chinese, have, as a race, as much intellect as European races. Why, then, are not the Chinese as strong as the nations of Europe? Why are American Indians the mere wards of European races in America? Because the environment of the Chinese has not been sensibly altered in two thousand years or more; whereas that of Europeans has been altered almost beyond conception. And it might be contended that American Indians are prevented from acquiring the environment of their masters by the force of that environment itself added to superiority in numbers.

But it must not be inferred that we hold that all human races are equal in intellect. There is excellent reason for believing that the very contrary is the truth. We may be unable positively to say whether natural selection has developed more complex brains in Europeans than in Kaffirs by the method suggested by Darwin or by the method suggested by Weismann. But that Kaffirs will ever develop a civilization like that of England or America we can well doubt,—doubt as well as that the gorilla will ever acquire the power of developing the strength of a savage race of men.

We may not be capable of saying whether it was increased intellect which followed upon enlarged environment, or enlarged environment upon increased intellect. But until some one proves the contrary, the presumption that environmental change is fol-

lowed by intellectual change must have the weightier value. It may be true that difference in the quantity of intellect possessed by different races is due to divergence, from whatever cause, springing up in common ancestors at a time when the *pithecanthropus* was changing into man; or it may be that very widely divergent races of men have sprung from different *pithecanthropi* simultaneously developed from lower forms. Whichever of these two theories be true, there can be but little doubt that the quantity of intellect possessed by races is measurably different.

It may be held that from savages who cannot now count above five might be bred a brain which, after one hundred generations, would be equal to that of a *Leverrier*. And it may be held that mere changes in the environment could achieve this result. But it is more highly probable that the brain of savage men long ago reached that balance with environment which renders new adjustments impossible, as in the case of the gorilla, the elephant, and the dog.

Whether acquired characters be transmitted or not, we know that the possession of certain acquired characters is the all-important force in the civilizing process. The intellect of the Chinese and that of Europeans of three hundred centuries ago may have been the same and it may be the same now. The difference then may have been one of environment only, and that may be the only difference between the two races at the present time. But if this be true, then environment is the all-essential thing. The European can never be displaced by the Chinese until the Chinese acquires an environment superior

to that of the European, and then the Chinese will be the stronger race just as it was three thousand years ago. We shall discuss this question in another place, where we hope to show that the influence of environment, through natural selection, is actually changing the size and complexity of man's brain, as it has done in the past. And while this may seem to be a surrender to the theory of Weismann, it will in no wise lessen the force of our position that acquired characters are all important, as in the case of the parasitic crabs.

CHAPTER IV

ORGANISM AND ENVIRONMENT CONTINUED

A CASUAL glance at the law of natural selection at once reveals to us the simplicity of the process. Natural selection is nothing more than the weeding out of organisms not in harmony with the environment. In its broadest aspect the law can be understood by a child. Organisms are destroyed by two forces: first, by the character of the environment itself; secondly, by other organisms which use their weaker fellows for food. The first process is a passive struggle for existence; the second is an active struggle.

In the passive struggle the environment alone does the weeding out. Let us illustrate this fact by a simple example: Let us fancy a race of sparrows living in a locality where food is plentiful and easy of access. The sparrows will vary from one another, let us say, in the length of their beaks. The beaks of some will be longer than those of others. But as long as length of the beak gives no advantage in securing food, the long- and the short-beaked sparrows will thrive equally well, and the average length of the beak in the whole race will remain the same. Let us now suppose that a change comes over the environment, or that the sparrows be removed to a

locality where food, although plentiful enough, is no longer accessible to birds with shorter beaks. It is clear that the latter, being unable to secure food, will rapidly die out, and the sparrows with the longer beaks will survive and propagate. The environment here simply weeds out the organisms out of harmony with the surroundings.

In this fanciful illustration we see at work the two great factors of natural selection. The survival of the bird with the longer beak depends upon *two* things: first, the character of the beak itself; and, secondly, the character of the environment. Each is equally important. We cannot neglect the one or the other in our conception of natural selection. We must take account of both, and we must do more than this; we must regard them as united together in a single process—the functioning of an organism in the surroundings from which it draws its nutriment. Natural selection is, therefore, a process having a twofold aspect, one part of which pertains to the organism, and the other to the environment. This process, acting through countless ages, has produced all the varied forms of life which fill the world.

The character of the environment is hence seen to be an all-essential factor in the development of organic life. This fact alone should force upon us the conclusion that the same truth is applicable to every form of social life as well. The conclusion, upon first thought, may not be forcibly apparent, but it will become so the moment we look at the various nations of men inhabiting the earth, and note the important part played by their environments in the development of their national life. We have seen, as

in the case of the reindeer, that a race of animals can work material changes in the environment, and that by doing this they can manage to survive ; while other similar races, without this power, will be eliminated.

Now, the simple truth about human society is this—that man has been able to work inconceivably vast changes in the natural things around him—greater and more varied changes than any other animal known—and it is to this fact are due his very great supremacy and the peculiar quality of his social state. But why has he been able to accomplish these extraordinary changes? How has he managed to upbuild so high a civilization, and to accumulate so vast a quantity and so many and such varied forms of wealth? to become so strong as to make the animals next to him in the scale of life mere instruments of his will and pleasure? There must be some principle here which, it is evident, is an all-essential fact of social science. What is it?

We have the highest warrant for searching for the cause of man's power in the part his environment has played in the history of the human race. If the character of the environment has been found sufficient to develop all living forms from a comparatively few ancestors, are we not warranted in the assumption that man's *greater* growth has been determined by the same cause? And if this be the truth where are we to look for the causes of social growth save in the character of the environment hedging in the races, the nations, and the groups of men of which humanity consists? We shall greatly facilitate matters if we leave the rest of sentient creation out of account, for the present, and give our attention to man alone.

Looking broadly at humanity, we find what are called civilized men, and men who are not civilized. Some human groups, bound together by tribal connections, wander over the earth without any fixed place of habitation; others live for centuries in one unchanging locality, accumulating wealth and acquiring power over their fellow-men, just as man himself masters his fellow-creatures, the beasts. The civilized groups are always found living for an indefinite time upon much the same spot, and from this fixed seat they extend their empire over other groups far remote from the central place of power. We can well imagine that at some far distant time, in the early days of man upon the earth, human society consisted of nothing more than a large number of wandering tribes, engaged in a migrating way of life, and in chronic warfare with one another. But the time came when this kind of existence ceased; when some of the nomads left off wandering and settled down to a continuous life of industry in one unchanging place. How was this peculiar state produced? What forced the nomads to stop migration and confine themselves to one locality, thereby gaining an immense advantage over the other nomads who did not, or who could not, practise the new mode of social existence? It is evident that the true answer to this question will give us the key to the entire history of human civilization and will account, in large measure, for the different forms of social life existing side by side to-day, or separated from one another by vast distances in place and in time, in character and in power.

The discovery of fire was an important change in

the relation of man to his surroundings. It enabled him to wander at will, safe and free, over the surface of the earth. It wrought an improvement in his implements of the hunt, and also in his implements of war. It served him as a means of making more palatable his food and of keeping dangerous enemies at a distance. But the use of fire could never have forced men to live together in a permanently fixed place, had there not been made another discovery lying at the base of the entire structure of civilization. This discovery was only the perception that a new use could be made of objects which had previously been used for purposes of food alone. Men discovered that they could so *change the environment as to leave them independent of the merely natural supply of food.*

It is impossible to exaggerate the importance of this principle in every question of human society, together with its laws, its purposes, and its development. We shall see how from the forces released by that ancient discovery has arisen every civilization within the scope of human observation; how the permanence of existing civilizations depends upon the play of these very forces; and how social progress, not only of the past but of the future, must be reckoned in the light of this principle if they are to be understandingly considered at all.

The discovery lay in the perception of the fact that animals and vegetables could be made to reproduce themselves *under the control of man.* Previously to that time it was not possible for men to abide in a permanent place of residence. When the natural supply of food ran short, they were compelled to

move to a new locality; were forced to search for fresh fields where the bounty of nature would give them the means of existence; where the predacity of man had not killed off the animals whose flesh would serve as nourishment. But these frequent changes of place were obviated when men discovered that cultivation of the soil and the breeding of captive animals would replace the old methods of dependence upon nature and the hunt. Thus arose the industry of *agriculture*, an industry of a twofold character, involving the regulated reproduction of vegetable and animal life for purposes of subsistence.

One or the other of these two phases of agriculture may have been discovered first: cultivation of the soil by the hoe method probably preceded the beginnings of pastoral industry; and true agriculture did not arise until long after the herding of animals and the use of the hoe had become established customs. When men found that animals, pastorally bred, could be used for cultivation of the soil, the hoe method was largely displaced by the plough method, and true agriculture arose into the system obtaining down to the present time.

The tremendous import of the discovery of agriculture has not been recognized by writers upon social science. While the broad fact itself has been the subject of much comment, its true relations to the history of mankind have not been fully perceived. It is a fact which, as we have said, lies at the bottom of civilization; for without it there could have been no diverging growth of nations, no rapid increase of wealth, no development of intellect, invention, or art, and none of that moral growth which marks

off the civilized man from the savage, leaving one or a few races, or nations, to be the masters of the earth and its empire. This is the new principle of social science we desire to develop here, and we hope that the reader will make a special note of it, for it underlies everything that is to follow in the succeeding pages.

Our new principle may be stated as follows: *Social progress depends upon the multiplication of wealth while the society inhabits an unchanging locality.* The tribe which ranges over the earth can never produce a civilization for the reason that civilization itself depends upon the quantity and the kind of wealth possessed by men. But once that a wandering tribe perceives that it can increase its wealth by the practice of agriculture, civilization of some kind, together with a corresponding acquisition of power, must follow inevitably. Let us develop this idea somewhat in detail.

A nomad tribe, struck by the ease with which wealth may be won by agriculture, would tend to remain in a fixed locality. In doing this, it would find that it could not only work a great improvement in its implements of war, but could also build superior and permanent fortifications invulnerable to attack from the weaker tribes near by. But from this quick increase in wealth would flow a corresponding expansion of ideas of every kind. Wealth would not only multiply, but property rights would become more complex and more numerous. New objects of property would constantly arise. Land would assume an importance it never had had before. The rights of men to many kinds of wealth would be in constant

dispute, and government would be necessary to regulate the internal life of the community. Government, too, would flow from the need of the group to protect itself against external enemies, and in this way would arise an instrument of force, or a fighting machine, to be used for external defence and internal peace.

The power possessed by a community of this kind would draw into it communities hard by, either by natural fusion or by conquest, and this growth would profoundly alter and expand every institution, the germ of which existed in the former nomad state. Mere strength or cunning in the hunt, or in war, lost much of its prestige when wealth was found to be convertible into power. A chief's possessions under the old system were the fruits of his strength; whereas under the new system, wealth might enable its possessor, reinforced as he would be by common interest and incentive, to outweigh with it the importance of mere bodily strength. Strength, when matched against external enemies, would still find its reward in riches, and the strongest man might still be the richest; but pure bodily strength would have lost much of its influence.

Institutions of caste in the surmounted system would develop rapidly with the new economic growth, and with the stability of property flowing from the changed environment. Nobility of a new kind, based upon quantity of wealth possessed by individuals, would emerge from the new social order. But one of the most important developments, following upon permanence of locality, would be the establishment of human slavery. If slavery existed previously

to the new order, it would be now enormously enlarged, and would pass through an involution of a very complex nature. The superior strength of fixed communities, venting itself in conquest of contiguous social groups, would now find a use for captives of war which could hardly have existed in the older and simpler stage. Man could now utilize in a most profitable manner the labor of other men in agriculture and in the arts which had grown up beside and from it. The use of animals for agricultural purposes was enlarged by the use of men in the same way. Human beings passed into the category of wealth, and were made objects of property rights. The nature of human slavery must be understood if we are to comprehend the effects which followed its establishment, or its very large extension and involution, after the acquirement of man's second great power over his environment.

How well that institution served the economic and the moral wants of society is readily seen when we consider these two phases of social growth historically. By using slave labor to produce most if not all of the common food, the primitive society was left free to develop that strength which, in early times, was most needful for the preservation of social integrity. This strength was found in the art of war. Before the development of international trade, and even long after it, war was the principal method whereby a community most easily, and hence most naturally, acquired new wealth and empire. The more efficient the slave labor at home, the more important would be the influence of the social group abroad. The military caste would, therefore, become

the most powerful in any successful group; and it was the slave caste which made the fighting caste possible, at least in its most efficient form. The political activities of prosperous nations would be almost entirely military. The army, serving as an instrument to enlarge the sphere of the nation abroad, would serve also to maintain the state of slavery at home. Between the extremes of slave and king would lie all the castes developed under the play of the forces aroused by the creation, distribution, and conservation of wealth made possible by the residential permanence of the environment. So natural and necessary was the institution of slavery that a conception of a nation without it was repugnant to the minds of most men. This was true, because slavery was an economic *causa sine qua non* of national power abroad, and hence of national integrity at home.

But the conceptions of men were slowly changed by new changes in the environment striking down the importance of the military caste. War was largely displaced by trade as a means of securing empire and wealth. Nations tending to develop internal industry were found to be the most prosperous. Commerce was discovered to be a more certain and less painful method of obtaining wealth than could be found in war. Warlike nations were forced to treat with commercial nations. Ruthlessly to destroy and enslave an industrious and commercial, if peaceful, people, was found to react with disastrous effect upon the conquering militant race. War became useful chiefly as a means of enlarging trade. Conceptions of right and wrong, justifying war, were modified, and ultimately changed into conceptions of the very reverse

character. The army then became an instrument in the defence of commerce or in its extension.

Environments developed in this way profoundly changed the opinions of men as to the prime importance of the military caste. Moral conceptions, rearranging themselves about this new centre, naturally condemned a system found to be detrimental to prosperity, and the institution of slavery began to fall to pieces. Its remains, as found in the feudal system of Europe during the middle ages, slowly disintegrated after the discovery was made that free labor was always more productive than slave or serf labor, and that serfdom, or slavery, was really an encumbrance upon a people rather than an aid to power.

Negro slavery in America had flourished because of its isolation and of the character of the fundamental law upon which the federation was constructed. The southern states, as might have been expected, were stronger in military genius than the states of the North. This was true because agriculture was entirely in the hands of slaves, leaving the master-class free to cultivate military traditions. The confederacy presented a state very like that of ancient Rome. It was a sporadic economic growth, quite out of relation to the environment surrounding it. It might have continued uninterruptedly for centuries had its isolation been complete. But it could not live in the midst of an environment so essentially unfavorable to its survival as that of the North and of Europe. The entire material wealth of the confederacy was insignificant beside that of a few states in the North. Its immense nominal wealth consisted of its slaves, and these could not be converted into instruments either

of defence or of aggression. When the conflict came, the confederacy fell in spite of the brilliant superiority of its military leaders at the outset. It had no wealth with which to match the instruments of its powerfully wealthy neighbor.

Not irrationally may we conceive that the entire history of nations may be explained on the same principle as that used here to show the causes accounting for the growth and decay of an institution which has given rise to the most diverse opinions and to the fiercest controversies upon which human thought has been expended. Yet when we examine into those activities of nations, the sum of which is called "human history," we find that they are all soluble into elements formed by forces released among men when societies discovered agriculture, and were thus strengthened by long residence in the midst of ever-changing environments fixed to localities which were themselves always the same.

Indeed, were it not for these very forces, history would have been impossible. If tribes were compelled to wander from place to place without the solidarizing, integrating, and conserving force generated and increased by permanence of location, civilization had never risen in any form. The stability and integrity of nations were not only dependent upon these forces, but were created by them. And these forces are more powerful to-day than ever before in the progress of every society in the civilized world.

To understand this principle in its true significance, we need only to turn to the history of any people in any age. Whatever dominant character that history may possess — whether it be warlike, commercial, or

æsthetic—it consists only of a narration of the changes within the social organism occasioned by *changes in the environment while the locality has remained fixed*. This is perfectly true of all of those nations with whose development we are adequately acquainted. That it is likewise true of nations not so well described in preserved records, there can be not the slightest doubt. The rise and fall of Greece and of Rome are fully described when the panorama of these changes is unfolded before us. We are not familiar with the beginnings of these groups, but we are somewhat better informed when we look to the nations of modern Europe. It is hardly necessary again to dwell upon the changes of environment through which Europe has passed, or to illustrate how it is *only* that change that has produced the European society of to-day, moral and industrial. And when it is remembered that these environmental alterations had been impossible, had not permanence of place been assured, it becomes clear that European civilization is the product of the forces we have described.

We have now to consider another and an important division of the subject. If we admit as true the principle here set forth, viz., that *progress depends upon change of environment without change of locality*, how are we to explain those very marked differences observed between nations developed simultaneously either in contiguous or in widely separated surroundings? What is the principle on which depend the heterogeneous characters of the social groups we see in the great family of nations of which human society is composed? That these differences are extreme

cannot be called into question. On the contrary, they make up the most conspicuous fact open to the observation of social science. No two social groups are alike. An anatomy of Russia will show that nation to be remarkably different from Germany. Italy, France, England, Austria, and Spain are all different from each other. China and India present still more striking unlikenesses to the nations of Europe than these latter present among themselves; while groups composed of European races in non-European localities, are yet unlike their ancestral groups in many important particulars.

It must be understood that we are here concerned with *social groups*, rather than with *races*. The question of race is here a secondary consideration. The United States is a complex of almost all the races of Europe. It is true that, very broadly, we may say that all of these are members of one or two great races. But we see that the nations of Europe present striking differences, however close may be the affinity in blood between them; while the United States and Australia are very different from them all. That the question of race is an important one, generally, and of primary importance, may be admitted without controversy. It would be idle to hold otherwise, when we consider the negro races of Africa in comparison, say, with the Teutonic races of Europe and America. The *phylogenetic* process may be said to be historical. That is to say, it is hardly conceivable that a new race of men will be produced from the mixing of races so very different as the Caucasian and the Mongolian. It is conceivable that slight differences, such as are found between the Teutonic and the Celtic

racess, may disappear in a race uniting these two. These races are mixing now, and types produced by the mixture are not appreciably different from the parent stocks, ethnically regarded. But if the phylogenetic process is complete, or nearly so, the *sociogenetic* process is not. That social growth is progressing rapidly in groups open to observation need scarcely be pointed out.

To return, then, to the inquiry. What is the cause of these marked differences between the species and varieties of nations of which human society is constituted? The only rational answer to this question is that offered by the theory of natural selection. Variation, seized upon by natural selection, has produced, through the complementary forces of inheritance and adaptation, all the races of living creatures inhabiting the earth; and these forces, through the influence of isolation, have caused the divergence we see in classes, genera, and species. While it is true that isolation has not been so pronounced as to cause very wide divergence between the few races of men inhabiting Europe, it has been pronounced enough to cause striking divergence between the characters of the groups or nations, *as* groups or nations, into which these races are divided. Divergence of nations is, in fact, a necessary consequence of the process of evolution set up by a constantly changing environment when the changes are due to fixity of locality. Some little illustration may be needed to make this point clear.

The earliest environment of ancient Greece was warlike. Until the Greeks became safe from external attack, the city-states best adapted to war

were the dominant powers. But these were deposed by the supremacy of Athens when commercial prosperity permitted the development of art. The progress of Greece was above all an æsthetic and intellectual progress. It is beside the question whether Greek art and Greek letters took their origin from those of Egypt or Assyria. The archaic art of the Greeks presents many characters similar to those of Egyptian art in its most highly advanced state. On the other hand, the influence of Egypt upon the speculations of the earliest European philosophers is a matter of some controversy. That the young and growing Greece should have been influenced by its old and stable neighbor is highly probable. And it is probable also that Greece, having taken up the movement at the point reached by Egypt in its highest development, should have carried it upwards on the only possible lines of advancement.

But it may be admitted that the origin of European art and letters was independent of African or Asiatic influence, and was spontaneous in its own environment. This question has little bearing on the matter here to be determined. Greece, in the classic age, was a nation with characters widely divergent from Egypt and from all other groups of its own or any other known age. Its isolation left it free to grow, and, within less than one thousand years, it had developed into a social organism as specific among the world's peoples as any race of animals among living things. The history of Greek art and intellect is the history of Greek environment. The very rapid acceleration of the æsthetic and intellectual develop-

ment of the Hellenes reacted with profound effect upon the industrial life of the people.

Art and intellect occupied the highest place in the esteem of the Greeks, and utility the lowest. The great men among the Athenians were the poets, the painters, the sculptors, the philosophers, and those persons of wealth by whom they were most liberally patronized. Philosophers were given the freedom of cities, statues were raised to them in public places, and on more than one occasion they were elected rulers of cities and given tyrannical power, simply because of their achievements in the realm of the intellectual. Poets, painters, and dramatists were the recipients of honors almost as great, and the works of Homer were regarded with a veneration as deep as that attaching to sacred scriptures among other peoples.

On the contrary, mere utility was despised. Useful inventions with the Greeks were the bare by-products of philosophical study. Aristotle, in whom alone, of all the philosophers, were the seeds of an utilitarian system, was far from diverting his philosophy from purely intellectual purposes. The useful was contemned alike by the cultured and uncultured. It is almost inconceivable, in modern ways of thinking, that this absolute devotion to the æsthetic and the intellectual should have been possible with the populace. But the conception will become less difficult when the environment of Athens is taken into account. Every free-born Greek was reared from his birth amid scenes tending to minimize his esteem for utility. When the highest honors were accorded to the thinker and the artist, it was natural that

proficiency in intellect and art should have been the most desirable qualification of citizenship, the more so that the democratic principles animating the nation left free scope for genius, however humbly born.

The accumulated effect of these forces is expressed in the excellence of ancient Grecian art, poetry, and philosophy. In the metaphysics, the cosmology, the mathematics, the dialectics of the Greeks, are found the germs of the modern sciences. The inductive method was suggested by Aristotle; the conception of evolution was familiar to all of the Athenians; the importance of definition was insisted upon by Socrates; Pyrrho foreshadowed the method of Descartes; Democritus and Epicurus sought the *quantitative* analysis of matter, and announced a theory of atoms. Thales and his followers attempted the *qualitative* analysis of matter, and remotely indicated the law of the conservation of energy; Plato attempted to erect upon a scientific basis a theory of The Beautiful and The Good, thereby touching closely upon æsthetics and ethics; the geometry of Euclid and the geometry and mechanics of Archimedes are comparable with the achievements of modern mathematicians.

In polite letters the achievements of the Greeks were in parity with their philosophical performances. Euripides, Aristophanes, Sophocles, and Æschylus produced the refinement of tragedy and comedy, while in lyric and narrative poetry, as well as in rhetoric itself, the literary remains of the Greeks are unexcelled. In painting, sculpture, and architecture, the Grecian masters left little to be desired. The masterpieces of Polygnotus, and of other great Athenian painters, were the ideals of the men who created

the superb pictures found in the ruins of Pompeii, some of which have been pronounced superior in mastery of line to the best work of modern draughtsmen. The Romans imported their artists from Greece. The environment of Rome could never have developed a Praxiteles or a Phidias. Vitruvius, the only Roman architect whose works remain, was inferior, in the purely æsthetic conception of architecture, to Phidias, who designed and supervised the works on the Acropolis.

Thus, the development of the Grecian people, diverging in the direction of art and intellect, created an environment of an æsthetic and philosophical character unique among the societies known to history. That this environment was extraordinary hardly needs to be emphasized when the fact is that much of it remains after the lapse of twenty centuries of decay; enough of it, indèed, materially to influence the art and letters of Europe in the present time. With the exception of the lever and the screw, the influence of ancient Greece upon modern industrial environment is *nil*. But the causal *nexi* between Athenian art and philosophy and modern Europe in these two departments of civilized life will not be disputed. If we grant, then, that divergence, as caused by isolation, produced the specific characters of the Grecian people, we may grant, too, that this divergence was itself the product of changes in the environment; and that the isolation lay essentially in the permanence of the locality.

The single example of divergence found in the development of the civilization of Greece will serve to illustrate the law in its general application. Analy-

sis of the differences between the nations of the present day will show that divergence has been caused by the same force producing an environment of art and intellect of a superlative degree in Greece. The peoples of Europe, with the exception of Russia and Turkey, are closely akin in their political and industrial characters; and this is to be expected because of the fact that their isolation is less marked than that of the two nations named. The economic environment of Russia has advanced but little from that of mediæval times. It is only within the last generation that Russia has materially increased its manufacturing industries. Serfdom was an institution of great vitality in Russia long after it had become obsolete among the Teutons and the Celts. Militancy would naturally continue to thrive in a group where the cultivation of the soil was carried on by a species of slavery; the ownership of the slave passing from the lord to the soil. Its isolation has enabled it not only to resist confluence of environment with its neighbors, but to preserve its own internal strength, and to continue little changed throughout the centuries.

The very powerful force exerted by the character of environment upon the character of social groups is exemplified in the similarity of Russia with its great congener, China. Both are essentially agricultural countries. Both are the most militant of existing states among the important civilizations of the world. The political organic life of the two countries is essentially the same. China has not the excellent fighting mechanism possessed by Russia, for the probable reason that its geographical isolation has

surmounted the necessity of very efficient methods of defence. If China had been as geographically close to the countries of Europe as Russia has been, it is probable that China would be now as strongly armed as the populous empire of the Czar. The æsthetic and intellectual environment of the Chinese diverges widely from that of the Russians. But that environment was established centuries ago and has not changed perceptibly within historic time. Chinese intelligence is no larger to-day than it was in the time of Confucius. Chinese art has not developed, so far as can be learned, within the measure of centuries. The æsthetic and intellectual environment of this people was developed long ago; and the Chinese refuse to be influenced by the methods of European development in these two directions.

The notion forces itself upon us that the very stable state of social organisms, like these two vast empires, is not due so much to "backwardness," as it is to a cause to be found in the fundamental nature of social growth. It is only rational to believe that a social organism has as many limitations in its development as any other organism produced by natural selection. The common error into which most men fall when discussing the apparent hopelessness of a nation like Russia or China, is to consider only the individual man and not the nation itself. Because it is possible to civilize an individual Chinese or Russian, it is thought that it should be entirely possible to convert these great groups into organisms like Germany, England, or the United States. But this by no means follows. The common error consists in leaving the national, or political, *psychic* forces out of

the account. A nation can never rise above the moral and intellectual state which is the product of its environment. Moral, intellectual, and æsthetic conceptions are, as we have seen, the effects of environment upon the social mind. And the growth of environment is a slow process.

Man, by artificial selection, can produce new and highly divergent varieties of animals and plants. His power in that process is very great. Given the same power over social organisms, and it should be clear that he could produce similar results. But this power is seldom, if ever, found. Marked as is the limit of this power in producing what might be called new *species* of animal and vegetable organisms, it is evanescent when an attempt is made to produce a new species of social organism. A powerful nation could, by force, impose much of its own economic environment upon a weaker nation. But never could a conquered nation, when it is far below its conqueror's moral and intellectual state, rise to the state of its master without a very long and very painful process of adaptation.

The civilized nations of the world do not, as yet, possess sufficient control over the uncivilized permanently to impose upon them environments which will so profoundly alter mental characters as to insure a permanence of a new psychic state. That such process will ever take place is highly improbable in the very mental nature of civilized men themselves. The motives controlling the actions of civilized nations are essentially economic. If Europe desires to "civilize" the Chinese, the desire does not spring from purely altruistic causes. European instruments of

force will not be used permanently to alter the environment of China, or of other Asiatic or African peoples, if the change be not economically beneficial to Europeans. We can hardly believe otherwise when we find that instruments of war are directed against savage and semi-civilized peoples so as to destroy those peoples for no other reasons than purely commercial ones. If, therefore, the civilizing process be none other than a forced change of environment, with a corresponding moral and intellectual effect, that change will not be made if from it there flow not commercial benefits to those who bring it about. Attempts to enforce such change are followed by partial or complete destruction of the conquered nations, and such has been the experience of history.

It is entirely conceivable that progressive peoples shall soon be able to force a new economic life upon inferior and weaker nations, and reap commercial benefits for themselves by doing so. This process has been going on in human society since the rise of true agriculture. It is only an enlargement of the process whereby man has forced new environments, for economic purposes, upon lower animals. But it is scarcely conceivable that the Teutons and Celts, or their mixed descendants, shall be enabled to fashion old civilizations into new ones except for commercial purposes. If China and other countries like her are to be "civilized," they can be civilized only by commercial conquest. No motive, save an economic one, is sufficiently powerful and continuous to induce Western peoples to force the rest of the world into the use of the printing-press and the railroad. To

suggest that any other motive is possible will cause thinking people to smile.

The essential importance of acquired characters is exemplified here. There is no analogy between the inherited characters of an individual and the acquired characters of a community passed down from generation to generation. The distinction between the social and the vital organism must always be borne in mind. A social organism does not inherit any character from itself. We cannot say that an individual man has *transmitted to himself* his own characters. His growth is determined by two factors: Inheritance and adaptation. Other things being equal, the environment may mould one man into an astronomer and another into a coal-miner. Both may have inherited a very high capacity, let us say, for music. But we cannot truthfully say that the mature man has *inherited* the form of his hands from the infant. The coal-miner's environment would mould his hands into a peculiar form, and that of the astronomer might produce a peculiar change from the normal in the eye. But eyes and hands are changed by adaptation alone.

This distinction will become clearer when we consider the growth of a social organism in the same way that we regard the growth of a vital organism. A young nation derives certain characters from its parent. The method of propagation among societies is the same as that observed among the very lowest protists. This method is by simple self-division. The parent organism grows until it reaches a size at which the nutritive process can be no longer carried on with mechanical facility. Then the organism

divides into two separate individuals, each of which is essentially like the other. In very much the same way are born new social groups. If a social organism can be said to *inherit* any characters at all, it must be understood that by inheritance is here meant something very different from inheritance as applied to vital organisms. The infant group is merely a part of the parent group transplanted in a new place. The characters which mark the new group are not inherited, really. They are really *derived*, and this distinction is all important.

If, when discussing social growth, we use the term "derived characters" instead of "inherited characters," we shall avoid much confusion of ideas. But there is another distinction between social and vital organisms in this process of propagation. All characters *derived* by the new organism from its parent are characters *acquired* by the parent. The tendency in the new group to acquire characters not possessed by its parent is not, as it may seem, an inherited tendency. That tendency is explained by the fundamental principle involved in the permanence of the locality in which the changing environment is fixed. Derived characters may be modified, eliminated, or developed until the new social group has been transformed into a people widely divergent from its parent-people. But all of these changes are the product of environmental alterations, constantly increased in specific directions by the isolation of the new community from the old. And all of them, without exception, are dependent upon the psychic forces developed in the new community by the new surroundings.

To illustrate this law we need only point out the

extreme reluctance with which European societies change their ancient governmental forms. European ideas of government, long associated with monarchy and nobility, shrink from sudden revolutions doing away with these institutions. The psychic state of Europe has been largely modified within the past five centuries in this respect. The power of kings and nobles has been materially lessened, but the forms of the institutions have remained, and will remain long after monarchy and nobility will have ceased to have any industrial significance whatever.

But changed as European ideas have been, they are still very different from those of the new communities formed by emigration. The most striking examples of this nature are found in the British colonies. The formal ties binding the colony-organisms to England are tenuously indirect. The internal structure of Canada, Australia, and the South African colonies are very different from that of England. Monarchy or nobility is not an institution in these communities. Nobles do not spontaneously arise in them. They can never develop a native king or a native nobility. Their citizens are so seldom ennobled by the parent community that nobility is not a desideratum. With the severance of the very slight tie associating them with the parent people, would vanish every vestigial idea of royalty and its dependencies. This has been proved in the history of the only colony so severed. The United States is the most striking example of the elimination and development of derived political characters, and New Zealand is the most striking example of that process in its effect upon derived industrial characters.

We shall have to discuss in another place the economic and intellectual growth of rising nations, and to dwell more at length upon this theme. It is desirable that here we confine ourselves to a consideration of social propagation and development in general. It is a matter of observation that characters derived from a parent community, or from a community closely related in national feeling, may develop rapidly in a young and growing group. So rapidly, indeed, that a few centuries suffice to produce a distinct type. This fact is illustrated in the development of ancient Greece, if we assume that archaic Greek art was derived from the fully developed art of Egypt, or that Greek philosophical speculation was derived from the already perfected philosophy of India and Egypt together. We find the Egyptian notion of metempsychosis and the Buddhist notion of reincarnation reappearing in Plato and in Pythagoras; and the Brahmin notion of evolution reappearing in the Milesian school. But the transplanted ideas, altering rapidly in response to fresh changes in the environment, produced the distinct type of intellectual and æsthetic growth found in the perfected philosophy and the perfected art of Hellas. Egyptian ideas of art, remaining isolated in their own environment, did not develop an acropolis; and we look in vain for any philosophy among the Aryans like the scepticism in which Greek intellect culminated.

It does not necessarily follow that derived characters must always be associated with a young group which is itself a detached part of a parent community. Social growth rests upon a *psychic* and not a *vital*

basis. If this were not an unalterable law, we could not in any manner account for the very great divergence between the political groups of Europe and their children in Africa, America, and Australia. It is the *ideas* of men — their psychic characters — that preserve the ancient forms of European governments. And only in so far as these ideas have changed, has Europe passed through the political transformation recorded in history. If this be true, a young nation, in the formative process, can derive characters from an older but non-parental group. This we can see exemplified in the Latin republics of South America. Their democratic ideas were derived from their older and more powerful neighbor on the north. Between the two was a close psychic contiguity. The United States, deriving its political characters from England, developed the idea of a representative government and eliminated the idea of royalty and its dependency of the nobility. The Latin republics of America and the French republic in Europe were produced by the same psychic process. The transition effected in France was more violent and less stable, because French ideas had not been so deeply modified as to make the passage from one form to the other easy and natural.

The idea of constitutional government had been derived by the United States from an already highly developed constitutional country; the revolution was easy and natural. France still retained its conceptions of monarchy and nobility in full force, and the revolution was therefore dynamic. But the French revolution was no less formal than that of England and America. For if the form of monarchy and

nobility was destroyed, their substance has remained. We are thus presented with the anomalies of a formal monarchy in England associated with a substantial democracy, and a formal democracy in France associated with a substantial militant régime. The public mind of France was prepared for the change to a constitutional monarchy, but not for a constitution as democratic as that of England. The attempt to transform the nation from a kingdom into a republic resulted in reactionary forces producing a monarchy no more limited than the one it replaced. It is more than probable that if the attempt had not been made to force a political form upon France, to which French ideas were repugnant, and for which no suitable environment existed, the revolution would not have been dynamic. The Prussian revolution of 1848-1850 was accomplished without a struggle of pain. Had an attempt been made to change Prussia into a republic, all the turbulent history of France had been repeated.

The social mind of France, in resisting for the past century the imposition of government to which the organism is not easily adaptable, has produced political redundancies that have given to France the reputation of the most unstable nation in history. Within a single century France has passed through a political fluxion in which are seen successively a kingdom, a republic, an empire, a restoration of the kingdom, a restoration of the empire, a second restoration of the kingdom, a revolution followed by a change of kings, a second republic, a third restoration of the empire, and a third republic. Compared with this, the most turbulent nations in history are stability itself. Be-

cause of these rapid reactions the people of France have been called "volatile." But, as a matter of fact, with this single exception, France is one of the three progressively stable groups of Europe. Its intellectual, economic, and æsthetic environment is equal in some respects to that of England and superior in many; while compared with that of Germany, it is superior in most. The cause of this remarkable state of things is found in the fact that the industrial, æsthetic, and intellectual growth of the group has been natural, while its political growth has been forced.

Political changes are always due to a transformation of mental forces, the roots of which are found in common needs. As larger quantities of vital force are converted into the form of moral conceptions, governments are modified so as to conform in their structure and function to the desires of the community. The governmental change may be great or small, according as the pressure of economic (hence the moral) force is strong or weak. If a community suffer from hunger or other forms of poverty, and associate its pain with the doings of its government, its natural desire will be to replace the government with another form or to substitute new rulers for the old. Moral energy, flowing from vital energy, thus moves the nation to action by which its pain is eased. And in societies of men vital force must *always* be converted into moral force before the change can take place. When the change *does* take place, its quantity is always determined by the quantity of the moral force which forms the motive.

The successive political changes through which

England has passed (with one exception) have not been violent in a marked degree. The monarchy has yielded, progressively, to the moral energy pressing upon it. The idea of monarchy has, therefore, not been associated with economic pain, and democratic ideas have constantly enlarged, while the form of monarchy has been maintained. The king of England has no real power to interfere in any degree with the industrial activities of the people, either by passively resisting legislation, or by actively controlling the army. The French kings, however, with their dependent nobility, were essentially a clog to the freedom of the people, and the nobles were really enlarging their power to a degree that made the common life painful in both its nutritive and propagative functions. The reaction was correspondingly great. When the change of government came, the nation flew to the extreme opposite form. As a starving creature will gorge itself upon food, the French people gorged themselves with liberty, if we may make use of so far-fetched a metaphor. With the satiation of their pressing wants, they returned, not to their normal mind, but far beyond it, and the military empire was established. Since that time France has been seeking an equilibrium between its political and its economico-ethical ideas, and the perturbability and perturbation seen in its political life have been the result.

In spite of the common conception of uncertainty associated with the political future of France, that future can be predicted with a high degree of certainty. We can understand the motions of political groups as definitely as we can those of planets and

comets, and even more so; for we have a more intimate knowledge of the efficient causes of the one than we have of the other. We understand the processes of nutrition and assimilation somewhat better than we do the nature of gravitation. We know that men, once having learned that they could store up food against the future, could never again neglect to sow and reap and to rear animals for future use. We know that when an organism learns by experience that contact with fire causes severe pain, contact with fire is mechanically avoided. It is natural to suppose that when military despotisms and slavery are found to be the most efficient instruments for the maintenance of internal peace and prosperity, despotisms and slavery continue to exist; and that when experience has taught that despots and slaves are only the cause of pain, despotism and slavery are modified.

It is unnatural to conceive that a nation whose growth and comfort has been largely increased by a limitation of royal power shall return to unlimited royal power as a means of further enlarging its comfort. To hold thus would be equivalent to holding that living creatures prefer a painful environment to a pleasurable one. A community, having passed from a nomadic state to a permanently located environment, will never return to a nomadic state in order to increase its power over other communities, and thus facilitate its own economic life. To hold thus would be equivalent to holding that the tendency of a planet is to stop and reverse its motion. Experience tells us otherwise. No great power of prophecy is required to assure us that there is no danger, however remote,

that England will return to a political state in which a Henry VIII. can exist upon the throne, or that the United States will ever again become an English colony, or that the Latin republics will voluntarily resume their vassalage to Spain. These things are not possible of conception, because we know that the moral sense of Englishmen regard with horror the sufferings of their ancestors under the reign of Henry; that the people of the United States are no more desirous now than they were in the eighteenth century of paying taxes to an English king without representation in parliament; that the Latin republics, however pure their kinship in blood to Spain, do not desire to be governed by a ruler in Madrid. If it could be shown that an unlimited monarchy would immeasurably increase the national comfort of England we would be justified in supposing that a return to unlimited monarchy would be highly probable. But all the evidence that human experience can offer shows the contrary to be the truth.

If we now apply this knowledge to France, its future becomes clear. The empire, as we have seen, was the result of a reaction which carried the nation backward to a government even more powerfully monarchic than that of the kings. The immediate motive of the French was found in their belief that this new and stronger form of government facilitated foreign conquest and hence a larger quantity of national wealth and ease. This illusion dispelled, the kingdom was restored, but the real power of the king and the nobles was greatly modified. A second reaction produced a new republic, and the crystallization of this republic into an empire was easy. But as soon

as the new empire came to be associated with poverty and discomfort, it fell, the more quickly when it was proved to be an inefficient means of discovering new comforts of mind by foreign conquest. The government replacing it, while more democratic in form than that of England, is really more militant. France may return again to a monarchic form, and another foreign war may serve to crystallize that form. But French ideas can never again tolerate an unlimited monarchy. The prediction that its industrial growth and the moral ideas flowing from it will maintain France in an ever-enlarging democracy is thus verified by experience. The mere form of the government is immaterial, as we have seen in comparing England and the France of to-day. It is the substantial government which is predicted.

For the illustrations here used of the actions of social organisms and the laws by which they operate, we have considered societies the histories of which are commonly familiar. The number of these illustrations might be increased indefinitely. But this is hardly needful. It must be understood that we are dealing with principles, and not with particular instances. The principles must apply to all societies developing in a fixed environment. In the succeeding chapter we shall examine into the phenomenon of the decay and death of social species, and attempt to point out the cause. But at present we need only emphasize the principle directly concerned with the growth and development of political groups. That principle may be stated in these words: The process of civilization depends upon the power of political groups indefinitely to alter their environment, while the

locality in which the environment constantly changes remains constantly fixed.

It may be argued that the same definition can be applied to a society in process of decadence. But while this may seem true, it will be presently seen that the principle is stated here only in its widest generalization. It will be seen that another principle qualifies the first one, so as to exclude from the definition the process of decay. And it will be further seen that the changes in a decadent civilization are due to causes lying outside the power of the society, or to the loss of the power further to alter the environment in order further to increase the organic life of the body social.

CHAPTER V

THE INCREMENT OF PSYCHIC CAPACITY

THE intimate life of a nation has many aspects touched upon but lightly, when they are touched upon at all, in that extensive literature going currently by the name of history.

Men are now interested in the simple and daily doings of those ancient peoples which long ago inhabited the earth, and of whose ways of life time has left few remains save those buried under the ruins of cities, or preserved in fragments of books which have escaped the hands of barbarians.

We are not satisfied now with a knowledge of the striking events of the history of Rome. We desire to know not only the details of the political plot culminating in the murder of Julius Cæsar, but would like to have described for us the kind of sword or dagger Brutus used and the kind of shoes he wore. We desire to know the fashions which Roman ladies were fond of, the methods practised in Roman kitchens to prepare the family meal, and the furniture and the decorations of the Roman dining room.

For us, the political character of Clodius, and the destruction he wrought in Rome, have scarcely a more vivid interest than has the manner in which the Roman gentleman took his daily bath, and the

implements he used in the process. A description of the apartments in Cicero's house on the Palatine Hill, and of his many beautiful villas, is more entertaining for us than his political quarrels and his exile. The methods used by the Roman people in building their domiciles, how they manufactured and preserved their wine, how they laundered their clothes, painted their pictures, and carried on their trade, within and without the city, are sometimes more worthy of attention than the battles of Germanicus or the Punic wars. We wish to know the character of Roman money, its value, and the manner of its minting. Did the Romans have banks like our own? How were their ships built and who built them? How were their goods bought and sold? What goods were considered of the highest value, and what were their notions of business generally?

All of these things have an important interest for us, and why? Simply because we delight to compare the private manners of a great and historical people with our own; and because, furthermore, it is of these simple manners and things that the continuous and permanent life of a nation is seen to consist.

There is yet another aspect of a nation's life which proceeds from the uses and utilities hinted at above; that is the *morals* of a people, together with their *mentality*. It is found in their national prejudices, their hopes, their aspirations, their pleasures, their domestic and family relations, their loves, their hates, their sorrows. This aspect of a national life is even of more sympathetic value than the mere parade of its utilities. We desire to know of the *things* a people used in their daily living, chiefly because in these we

can find the key to their common thoughts and their simple human feelings. It is this thought-life, this life of passion, of feeling, to which is given the adjective *psychic*. And if we are acquainted with the common psychic life of the Romans, we can more clearly comprehend those large and stirring events of Roman history which arise out of it to mark a period or to culminate an age. In the present chapter we shall discuss a particular phase of this psychic life which we have attempted here to define. But before proceeding to that discussion, let us review the principles of social growth laid down in the pages which go before.

Men, in common with all living creatures, are compelled by the strongest promptings of their nature first and above all to secure, with the least possible effort, those things which afford a free and ample life, and which enable them to reproduce and rear their offspring in peace and security. In doing this they come into conflict with individuals of their own kind, all of whom are impelled by motives of a like nature. All are moved to action by forces primarily rooted in the bodily functions of life. Out of these bodily functions arise the functions of the mind—that psychic life which, through the faculties of memory and reason, makes possible a larger and united life called social. As an ample and a free existence for the individual is deemed the highest good, so are deemed right those acts by which that purpose is furthered; whereas conduct interfering with that freedom and amplitude is deemed wrong. Thus we see that vital force is converted into moral force, and moral force is mental, or psychic.

The primary foundations of great groups of men, like tribes and nations, are found in certain needs of organic life pertaining to the rearing of offspring. The young of man are kept close to the parents for a long time after birth, and on this natural necessity a habit of association is formed becoming permanently fixed as new families are produced and social needs are enlarged. Foundations thus laid are the rudimentary beginnings of the larger and more complex social organization which comes about when men discover that they can cultivate the soil and breed animals, and by this practice secure a permanent place of residence for the tribe, around which accumulates an ever-expanding artificial environment which, together with the land under it, has been called *wealth*.

Upon this important and fundamental relation to the environment the secondary foundations of society are built; and from these latter arise those wonderful superstructures of civilization known in human history by the name of *nations*. It matters not when or where we find a nation; whether in past or in present time; whether powerful or weak, rich or poor, civilized or semi-civilized, it is always built on these foundations and on these foundations only.

With this new power over nature comes increase of every faculty, of every liberty, of every function, individual and collective. As the physical life of a people expands, so does their mental or psychic life, and, inclusively, their moral conceptions and sensibilities. It is this difference of environment, this increase in the number and kind of tools used by men, that marks off the civilized man from the savage.

The higher moral sense of the European, as compared with the African negro, is due to his environment primarily; and it is by no means improbable that the heavier and more complex brain of the European is due to the same cause.

The psychic life of the individual man—that is, his desires, his hopes, his aspirations, his moral and intellectual energy—is therefore found to have its roots in the things surrounding him; and upon this psychic life of the individual depends the character of the social life of the political group of which he is a part.

When we treat, then, of social life and social growth, we must not forget that its basis is mental as well as physical; and its closest relations to the individual are really *more* mental than physical. For that reason the mental energy of a great nation can profoundly alter its social code—the rules by which its individual members are bound. Having understood that the physical wants of the individual are perceived first in a mental way, and then satisfied by the action of the mind upon the body, we can proceed on the principle that social growth arises out of psychic growth. At the same time we must remember that social action is something more than a number of individuals each one of whom is seeking to gratify his personal wants. It is very much more than this, for this would only be a *mixture* of mental units, whereas social action is a *combination* of such units, each of which is profoundly altered in its nature by contact with the others. We can carry this figure of speech farther by likening social life to a chemical compound, such as water. Water is not

merely two atoms of hydrogen and one of oxygen. In the compound product these two gases, *as* gases, disappear. Water, the product of their union, has properties quite different from the properties of either.

So the action of an individual, functioning in a group, is something more than the functioning of a man. It is the functioning of a man inseparably bound up with others of a like kind. The man can be conceived as being isolated from society. But once we so conceive him, we take from him every trait which proclaims him a social being. Social action, then, must be conceived as meaning the combined product of individual desires, all of which are modified, in every one of their aspects, by contact with the force of similar desires in others.

No matter how much we might study the body of a man, in its physical structures and functions, we could never conceive of him as a social being, and hence we could form no conception of the part he plays in society. Such a study would be very similar to separating from a play the lines recited by one of the *dramatis personae* and reading them by themselves. From such reading, however close, we could never learn the plot of the play, the bearing of the various parts upon one another, and the concerted action which comes to *denouement* in one scene, and is made perfect in the last. To know what the play is, we must have all the persons before us, and by following the concert of action through the play, master the united purpose of the several and confluent parts.

One more illustration of this principle may be useful in preparing the way for the pages which are

to follow. Let us suppose that the physiologist desires to study the function of the human brain. The most important part of that organ is made up of innumerable minute bodies called ganglion cells. Any of these cells can be studied by itself, and much of its function — within itself — can be described and understood. But is it not manifest that he who would master the function of the brain must understand, not the individual cells in themselves, but the *manner in which they act together*? Given the nature of the ganglion cell itself, that knowledge will help us to understand the united action of all of the cells; and inasmuch as we can understand the one, insomuch can we understand the other; but of cells or brain we can understand very little until we have understood the functions of both.

We can now approach the subject indicated in the title of the present chapter.

In a developing social group there goes forward a twofold process of change, — change in the expanding artificial surroundings, and a corresponding change in the internal structure of the group, — this latter alteration being usually described by the term “political history.” This double process began when the group itself, or its social group-ancestor, discovered that it could alter its environment without the necessity of changing its locality. But these continuous changes would be impossible did not every fresh alteration of the surroundings leave a new effect upon the social mind which, in turn, reacts upon the surroundings. Some illustrations are necessary to make this law clear; and while we are drawing them, let us always remember that we are endeavoring to

understand social action, first by understanding the action of the individual, and then by comprehending how innumerable individuals, all imbued with the same motives, modify their reciprocal conduct.

It is a fact with which every one is familiar that as soon as an individual acquires the things he desires, he immediately finds that his desires have been enlarged, and that his wants, comparatively few before, are now comparatively many. If this were not a bottom fact of human experience, there would nowhere be observed that very conspicuous phenomenon observed everywhere and in all times—the accumulation of riches by individual men. Riches is only another name for wealth, and we have already noted that wealth consists of land, in its natural state or otherwise, and of the things produced by human labor. Men love wealth primarily because it facilitates those two motive functions of life and propagation of which we have had so much to say. But the capacity for the use of wealth depends, very largely, upon the *actual possession of the wealth itself*. We can illustrate this law by a few extreme examples.

The man of culture can find a pleasurable use for the many and varied things which form his personal surroundings. He can derive enjoyment from numerous products of industry and art which would be perfectly useless to the less cultured man in whose hands they might be placed. A profound musical composition which, to one ignorant of music, would not be as useful as the homeliest product of industry, is, to the cultured man, a source of the keenest pleasure. Literary and scientific books which, to the unlettered, are mere encumbrances, are to the cultured man a

conditio sine qua non of happiness. Objects of beauty in general, highly prized by the man of culture, in the ignorant and untrained mind, are only remotely associated with genuine enjoyment. And why? Is it not clear that the obvious reason is this: That the cultured man has for the use of certain objects a capacity which the uncultured man has not?

This fact is, as we have said, obvious. But what we wish here to find out is, not so much the difference between men in their capacity for the use of wealth, as the *cause* of that difference. Why is one man capable of deriving the keenest pleasure from the use of a piano, while others would be only encumbered and annoyed by its possession if they themselves were required to play upon it? The answer to this question becomes quite plain when we give it the reflection it deserves. The expert performer can use a piano because *he has had possession of the instrument for a long time*. There is no other reason. If he had never possessed it, he never could have used it. And if he is an expert performer, it is only so because continuous possession of the instrument, together with continuous use of it, has given him a capacity for its use which otherwise he could never have acquired. At one extreme of our comparison we find the expert pianist; while at the other we find the individual who cannot strike a simple chord.

A piano is only a part of the environment; and thus we may state our particular conclusion in general terms, by saying that the nature of the environment has widely enlarged in the one man a potential capacity which is common to both.

The capacity of the son of a musician for music, or

of the son of an astronomer for astro-physics, would be larger than that of a coal-miner's son for either. It is meant, of course, that the sons of such artists would be taught the use of musical instruments and of spectroscopes. We do not mean that a laborer's son might not make a more proficient musician than would a musician's son. We know, in fact, the contrary is sometimes true. But the coal-miner's son, reared in the mines, with never a sight of a musical text or of spectral analysis, would be capable in no wise of using those tools which, in the hands of the artist or of the observer, long possession had made easy and familiar.

But these are only extreme examples. Between the extremes lie many degrees of difference. If a tool has been in the possession of one individual longer than in that of another, the one, on our principle, should have greater capacity for its use than has the other. There is a variant in quantity from the formula, which we will treat fully in another place. That is to say, given equal use and equal possession to two individuals, and one will still have greater capacity for use than the other. Thus of two men, having had pianos in their possession the same length of time, and having used them with equal industry, one will be a more expert pianist than the other. The reader has probably thought of this variant himself, but we must content ourselves here with the promise we have made of accounting for it later. Here we desire to emphasize the general principle which will not be denied by anybody: Capacity for use — all other things being equal — depends upon the possession of the thing used. Of two pianists,

equally capable by nature for the art of piano playing, that one who has used pianos for the longer time will be able better to perform upon them. Thus, in principle, all differences between human capacities for the utilization of wealth are determined by possession. The individual who is very poor, who possesses very few things — let us say just sufficient to subsist upon without positive pain — will have a utility-capacity proportionally smaller than his more fortunate fellows who have had more than sufficient for these natural wants.

It may be asserted, however, without fear of contradiction, that all normal men have equal capacity for the thorough enjoyment of those simple things — food, clothing, shelter — which make pleasing and easy the functions of nutrition and propagation, — of life itself and its healthy reproduction. Any limitation, however small, put upon the freedom of these two functions cannot endure without the accompaniment of pain in higher or lower degree.

From this general law there flow important conclusions. As the individual is enabled, by whatever means, to annex to himself a large share of the environment, — to increase his wealth, in other words, — his capacity for both the use and the enjoyment of wealth will tend to enlarge. But the ratio between wealth possessed and capacity for enjoyment is itself subject to an increase. The increase is geometrical, if we may appositely use the figure. The increment of capacity is always enlarged beyond any possibility of gratification by mere possession. This process, of enormous and seemingly disproportionate increase, is, however, purely mental. The desire for possession

is psychic, and is satisfied by a psychic fact, when the quantity of the desired wealth outruns the physical capacity for its use. Thus, if a man desires to own a railroad and its rolling stock, his want is satisfied when he is assured in his mind that the law gives him exclusive control over all the things which go to make up a railroad.

Of course one individual cannot himself actually use all these things. At best he can use but an insignificant part of at least the rolling stock. He may not desire to use any of it. He may never care even to see the roadbed or the stock. His use for them is purely mental use; and as we have said, his want, being purely mental, it is satisfied by a mental fact.

Now, this disproportionate increase as to possession and capacity is precisely the principle upon which are to be explained those remarkable phenomena of mind grouped under the vague and highly inadequate terms "idealism" and "ideals." It also explains every other fact of human progress of whatever kind. But as we are dealing here only with use-capacity, we shall speak of *things* and the power of using things, mentally and physically. The nature of property rights is social and hence psychic.

Let us ask now if there be a limit to this mental capacity for possession, and if we find that there is not, let us ask if there is a limit to the quantity of things which a man may desire to own for himself and over which he can be given exclusive control. In other words, is there a limit to the wealth which an individual may possess of his own right?

If we remember that the capacity for ownership is mental as well as physical, and that we are here dis-

cussing the former, we may answer the question by saying that there is *no* limitation to the wealth an individual may desire, save that found in the total quantity of all the wealth that exists. If the capacity were physical, if the individual were required actually to use the things he desires to own — then the limitation would be very narrow and easily defined. But the capacity is not physical. It is mental. And no such limitation exists.

Let us remember, now, that the same logic applies to mental capacity for ownership as that which applies to physical capacity for use. *The increment of capacity is widened by possession.* Thus we can understand those degrees of power to own and of desire to own which mark men in every age. We can understand how some individuals may have a capacity for ownership which, by enormous increase of possession, has been rendered so large as to remain unsatisfied with any quantity of wealth short of everything attachable, by property right, to one personality. The size of the capacity has nothing to do with the possibility of the individual using the things he wants. He does not want use; he wants possession, and history offers us numerous examples of extraordinary capacities of this kind. We need only instance the Roman Cæsars, and Alexander the Great, who not only desired all the things in this world, but “longed for another world that he might conquer.”

So far as the author of this book is aware, the phenomenon he has here described has not been observed, analytically, by other writers. The phenomenon itself is common enough to have passed into popular

proverb. In our daily conversation we say that "things which were luxuries last year become necessities this year"; that "the more one acquires the more he wants." There are a dozen similar sayings all of which recognize a fact of universal experience. But it is doubtful if this law of utility and of mind has been regarded in its real relations to social progress. Certainly we do not know that it has ever been given a definite name; and this want we shall here attempt to supply with the term "incremental capacity." For the process itself—that is to say, the action of increase—we can think of no term more fitting than "incrementation," although this word is a pure coinage of our own. Incrementation, we conceive, is a more general term and hence, for this particular purpose, a more efficient one than "progress." When we describe the *process*, therefore, we may sometimes use the term incrementation; and when we desire to denote the instrument by which the process is furthered, let us call it the incremental capacity.

We must beg of the reader to remember that the work we are here attempting to do is an analysis of what is perhaps the most complex motion conceivable; and that is the entire assemblage of human facts. He must therefore be prepared to hold in his attention not one principle of human conduct, but all of the principles we develop as we go along. For as each fresh principle we deal with grows out of the others, it is important not to forget their mutual bearings, each upon the other, and one upon all. As we are writing for the general reader, as well as for the trained student of political and social science, we shall

try to carry the former along with us and to repeat, at times, the matter we have already considered. The author believes that by these reminders the average man will be enabled to grasp the general bases of the argument, and to understand the supreme conclusion reached.

The entire fabric of our design depends upon the perception of the simple truths of life which any man, however limited his culture, will readily apprehend. It is only when we try to keep simultaneously before us many of these truths, and to note their relations to each other, that a little difficulty will arise. But much of that difficulty will disappear when we adopt the methods of the ancient schoolmasters who bade their pupils always to remember the *rule* when engaged in solving problems.

We make this digression to introduce to the mind of the reader the bearing of the increasing capacity upon a very important principle laid down in the preceding chapter. This was the principle of the growing environment in the fixed place. We have seen that the capacity for use depends upon possession. But that is not all. It depends also upon something else. It depends upon the fact upon which possession itself depends. That is, it depends upon the *quantity* of things possessable. If the quantity be large, the capacity will be large; if the quantity be small, so will be the capacity. This is not half so difficult a conception as it appears. For if it be true that the more a man has the more he wants, it should be plain that the more he is able to get the more he will be able to desire. Now, as the quantity of wealth — that is, the *environment* — con-

stantly increases, the quantity of possessable things increases with it. And as this increase of wealth is fundamentally due to the fact that environment is changeable, while the place upon which it grows remains fixed, it follows that the principle of the enlarging capacity is derived altogether from the principle of the cumulative wealth. An individual would not and could not desire to possess a piano if a piano had never existed. But having a harp, he might easily desire to increase the number of its strings; and this increase, together with other accidental observations, might lead him to play upon the harp with hammers instead of with his fingers. These simple observations, constantly increasing in number and in variety, would, we can conceive, result in the manufacture of a grand piano. And such, indeed, is the fact. It is a fact, also, that with innumerable pianos easily obtainable, the number of persons desiring pianos would be proportionally large; and this increased capacity for possession would arise out of the further fact that, innumerable pianos being obtainable, innumerable persons would be capable of using them.

If the reader will only bear in mind the intimate and causal connection between the two phenomena — that of the incremental capacity and of the cumulative environment — he will presently see how the play of these two forces produces the most profound changes in any rapidly developing social group. In pre-agricultural times tribes ranged over the earth without any fixed habitation. The number of usable things was hence necessarily limited. And the limit upon wealth restrained the capacities of men from

mounting to higher degrees. But as soon as the discovery of true agriculture was made all this was changed. The capacity for use, or for ownership, was increased in proportion as the quantity of wealth in general grew larger. Out of this twofold cause would arise a twofold effect. Not only the total wealth would become cumulative, but the wealth of individuals would undergo a like change. Many individuals would grow constantly richer, but, of course, some would be richer than others.

Let us observe the effect of this fact. The capacity for use and ownership is regulated by the quantity of possessions. If a man have much wealth he can enjoy much ; and if little, his power of enjoyment is small in proportion. But the division of wealth is always unequal. No two men possess precisely the same quantity of wealth. There is variation in the size of private possessions. Therefore there is variation, too, in capacity for ownership. In a state such as we are describing, the total wealth would constantly enlarge. The aim of every individual would be to secure for himself as much of it as he could. And as natural selection would favor those who had the ability to increase their store, the number of such fortunate ones would tend to increase. It is not that those unfit to accumulate wealth would die ; but that wealth would flow to those who could acquire it, and these would naturally increase in number with the expanding wealth available. By this means an ever increasing number would enjoy, in an ever increasing degree, the functions of bodily and mental existence.

Of course it is clear that the richer, or richest

individuals, could not themselves personally use all of their wealth. Most of it, indeed, would be actually used by others while the *control* of it would adhere to a few. As the capacity of the over-owner would be purely mental, it could grow apace without seriously interfering with the actual use of the wealth on the part of the use-owner. But the capacity of the use-owner himself is subject to the same law of increase as that of the real owner. The richer the over-owner would become, the greater would become the wealth in the hands of those who would actually use it. And here we are met with a singular phenomenon.

Let us say that the constant increase of wealth, not his own, in the hands of the use-owner, would so highly develop his capacity for enjoyment that he could be no longer satisfied with existing systems of tenure. What then? Either the system of tenure would be changed, or the use-owner's capacity would grow smaller while the wealth in his hands would actually increase! Of course the latter proposition is absurd. The only resultant phenomenon conceivable would be a change in the system of holdings. And this is the very cause which has changed the entire economic methods of Europe from a system of serf labor to one of free labor within the past ten centuries.

Let us glance at another phase of the law of capacity as it affects the individual. While it is perfectly true that a man may really desire to own everything ownable, it by no means follows that he can do so as a matter of fact. Indeed, as a matter of fact, he can do nothing of the kind. In political science there is

a conception by which we admit that, in theory, a sovereign power owns everything. We will only confuse matters here by going into that question. We can discuss it at another time. Here let us ask, What is the nature of the restraint laid upon individual men in their acquisitions of wealth? Restraint there must be, for if there were not, some one individual would own everything. There is certainly no lack of desire, since it is seen to inhere in the majority of men from the beggar to the autocrat. Even very honest and sincere, if unthinking, philanthropists would like to be absolute masters of all wealth, if only for the purpose of seeing that it was properly used. What, then, is the restraint?

The answer is to be found in the very desire itself and the complex facts flowing out of it. When two individuals of equal strength quarrel over the possession of a divisible thing, the thing, in all probability, will be equally divided. We can conceive of no other issue; at least if we assume that behind the equal strength of the contestants lies equal desire for possession. But when we come to apply this principle to the common affairs of social life, we behold arising out of it a phenomenon of the highest importance. That phenomenon is the *moral sense* of men with concern to wealth and the manner of its division. The desire for self-aggrandisement, ever pressing the increment of capacity forward, is thus converted, by the general conflict of its forces, into an energy of mind to which no other term than *moral* can be applied. So long as the satisfaction of private desires, within certain limits, is deemed good for men, most men will insist upon individual liberty within

the limitations marked. If any social code of wealth-division be found to serve well the common desire, that code is sustained by the common moral judgment. Thus the system of slavery has the moral approbation of a community which conceives that the free members are best served by slavery. It may be that the community would be really richer and freer without the institution. The common moral judgment may be based upon a false conception of facts. But as long as the master-class is convinced that comforts are more easily secured by slavery, slavery will be morally approved. Let the community see, however, that its perception is false, and the moral judgment will be altered. The institution will be as wrong then as it was right before. If the community discovers that its slaves are the cause of internal poverty, or of exterior weakness, the system must go to pieces, or the community must lose its freedom.

Thus far we have contemplated the action of the incremental capacity in its aspects affecting the individual. We will now consider it as it operates upon a social scale.

With the expanding environment and the consequent expansion of desire for wealth, men's ideas concerning wealth and the right to own it pass through important modifications. The modes of wealth undergo a similar fluxion. Opinions and ideas can very seriously alter the appearance and the uses of a community's possessions, and the power of the individual, or of the community itself, over certain parts of wealth. In America men think it wrong that church property should be taxed. On a highway the foot passenger has eminent rights. School

buildings are protected by a special sanctity. The state says to the individual, "You shall not use one inch of this ground, or that ground, if, by using it, you shall permanently prevent a similar use of it by others."

This is only another way of saying that the incremental capacity, functioning in the growing environment, has changed the nature of wealth from one mode into two. Thus arose the two categories of public and of private wealth and property. Notions of right and wrong split up wealth into two kinds, one of which was left attachable to the individual, the other remaining out of his reach. But as the total quantity of wealth increased, the number of things made public property increased in proportion. Yet this constant enlargement of public wealth by no means limited the struggle of the individual to attach to himself as much as possible of the wealth which remained so attachable. Once a thing became public property, it could never relapse into the other mode so long as the moral sense of the community forbade it.

What we have here described is no more or less than the origin of public property. We can illustrate the matter by a simple example. Let us imagine that a village springs up on the sides of a country road. The land used for the village street may be the property of a private person. But the very necessities of the life of the village would demand that the road be kept open for the use of all. As the village would grow, the needs for keeping the road open would grow with it. Without the general right of way, the business of the town would be blocked. Thus the road would acquire a certain kind of sanctity which

none could violate with impunity. It would be to the interest of every individual to keep the road free at all hazards. He who would attempt to restrict that freedom would be condemned as a public malefactor, and with the best and soundest of reasons. To place a permanent barrier in the road would be adjudged a monstrous *wrong* by the users of the highway. So, out of the physical necessities of the people would arise an idea, moral in every sense of the word. The road was found useful for the common needs of daily life. To put a stop upon the satisfaction of these needs would be wrong-doing in a high degree. The community would be a unit against it. Here the connection between utility and morality is clear and indisputable.

This idea of morality with concern to the road would include the private owner of the land as well as others. It would be to his own interest to leave the road open. He himself would be forced, for his own profit, to maintain the public rights, and thus the general moral opinion would enforce a practice which took the land so used from its former state of private property and placed it that of public property. The community could never give up its public right to the road without destroying its own existence.

All this logic, however, will be seen to apply not only to lands used as roads, but to every other thing a community deems expedient to withdraw from the control of private persons and to make an object of public ownership. But it will appear, from our argument, that this rearrangement of wealth cannot be made until experience has taught a social group that greater economic freedom flows from public owner-

ship than from private. The principle is fundamental and universal. Once that a community finds its liberties and comforts better served by public than by private control, it is deemed wrong—essentially and absolutely wrong—to permit the instrument used for securing the general comfort to lapse again into private hands. Unless we admit this truth we must eliminate human desires from our consideration. This law, however, is only the action of the incremental capacity in operation upon a social scale.

Still bearing in mind the fact that as wealth enlarges, men's capacities for its use and ownership enlarge with it, let us look at some of the effects of this double action and double reaction on, let us say, a young and developing group of men living in a fixed place. The changes set up by this fixity of location and this increase in wealth are no less than the life history of the nation, or the group, or the people concerned.

With the rapid expansion in the number and kind of things created by the labor of the group, ideas would multiply, liberties would enlarge, morality would increase, and the thought-life and bodily life of the group would take on that quick and beautiful growth which has led so many thinking men to the conviction that human society is an organism governed by laws such as those which rule the life of a living creature. Responding to the play of social forces, the group sees new value in things but slightly valuable before, while objects which were once of no value whatever now become highly desirable. First among these things is land, because of its basic relation to the groupal process. The space utilized for

the more or less expansive site of the general habitation is the tie that binds the expanding movable environment together, releasing the forces whose play, through the increasing capacities of men, fashions the young society in its desires, its institutions, its intellectual and its moral existence.

The plastic and sensitive social structure responds rapidly and easily to the pressure exerted upon it by the ever-changing environment of wealth. The food-animal and food-plant are now transformed into the beast of burden and the seed. The rude hunting tool, or implement of savage warfare, becomes the instrument of manufacture or of agriculture. The loosely constructed hut expands into the substantial and enduring home. Mere trails, beginning nowhere and ending anywhere, are changed into well-worn roads with definite terminations, or, flanked by busy houses, are now the streets of populous cities. Man leaves the woods and the mountains and establishes himself on the plain. The beginnings of civilization, the dawn of human liberty, of enlightenment, and of genuine knowledge, has arisen.

In such a group, bound together, as it is, by the immovable foundation of its site, every new idea, every new utility at once becomes social. Fresh wants are satisfied by fresh creations, and the environment of wealth waxes in quantity and multiplies in variety, producing still newer wants to be met by new creations without end. In response to the action of accumulating wealth, the thought-life of the group — its mental and moral nature — sways this way and that, broadening here, deepening there, flowing forward as fast as may be to adjust itself to the civilizing

forces set up in motion by the growing and convolving surroundings which it builds around itself and in which it exists.

An unit in this complex mass, the individual finds that by the pressure of his fellow-individuals the circle of his liberty is constantly widened in one way while it is constantly narrowed in another. If he is forced to think of the rights of others, he is no less firmly established in the rights that are his own. If he may not take from another, others may not take from him. If he may not slay his fellow, he is left free to reproduce and rear his offspring in peace. If he may not openly rob the weaker man of his possessions, he is safe in the retention of things he has already won. He finds, too, that by his grace of unitship, he is benefited by innumerable comforts which are seen to spring up directly from the social code which is forced upon him. The liberty he surrenders is vastly outweighed by the new liberty he is given in exchange. He perceives by experience that the social fabric of which he is compelled to be a builder is, by its very nature, a shelter and a protection for his own head. He learns more and more the force of the truth that as a member of society he is everything, and that without society he is nothing. He sees that *his* want is the want of all; that a wrong to him is a wrong to all; and upon this perception of a truth founded upon selfish purpose and selfish weal, the importance of the group grows upon his mind, while his own importance seems to take a secondary place.

In this way the individual discovers that the idea of the group is inseparably bound up with the idea

of self. He perceives that if he himself is to live amply, the group must live amply first. And this conscious paramountcy of the group, affecting all individuals alike, issues into social growth producing two social instruments, or organs. One of these is the fighting organ, or army, designed to protect the group from external danger. The other instrument arises from the need of internal peace — for the group is threatened, too, with danger from within itself. This organ of internal defence is called government. It stands between individuals in dispute, and enforces its decisions with the fighting machine primarily organized to defend the group from external attack.

So it is that government, after the group is established on the fixed site, expands in a degree impossible to the wandering tribe. Law and order emerge, impregnable and implacable, from what was a mere rudiment in the savage state. As wealth accumulates around the group, social motion settles down into deep grooves in which it runs with irresistible power. Individuals, classes of individuals, the group itself, are drawn forward by forces of unalterable and inevitable regularity. At the source of the motion are the springs of human hope, human hunger, and human love. Upon the surface of the stream are the billows and the eddies, the rapids and the cataracts of crime, of religion, of revolution.

Upon a survey of these facts are we not led to the conviction that human history may be analyzed into the simple elements we have here described? Given a man, and you have the unit of which human society is made up. Take him from whatever company you please, in times past or in times present; let him

come from the Arctics or from Fiji, from London or from Peking; cover him over with the spoils of a Solomon, or strip him bare to the black hide of a Zulu; give him the brain of a Bacon or the misty intellect of the Bushman; let him dine in state or gnaw at the charred flesh of the beast he has just slaughtered; place him in whatever light you will, and examine into his structure as nearly as your wit can fathom or your eye can reach, and you will find him like all other men in every essential attribute of his being.

If we know the man by himself, we have the basis of a knowledge of the man as he comes into conflict with others of his kind, and we are warranted in drawing no conclusion concerning social action which does not find its premise in the action of the individual. The elements of individual action are found in the forces moving the man to eat and to multiply his kind. The elements of social action are these individual forces fused together. Wealth supplies the means for the satisfaction of the basic desires. Upon the increase of wealth depends the increase of capacity for its use. But increase of wealth is made certain by a multiplication of men in a fixed place. And this interaction of capacity and wealth are the foundations upon which human society rests and the only foundations conceivable. Upon these foundations have arisen the civilizations of the past, and upon them must arise the civilizations that are yet to come. But the structure is yet building, and many are the complex characters it assumes as it grows in function and substance and power.

Fixed upon the soil of Europe are many forms of social life, from England with its magnificent intel-

lect and wealth in the West, to Russia and Turkey with their ignorance and poverty in the East. In America, the United States, rich and free, trenches on Mexico, squalid and superstitious. China and India, those vast families of groups, fill up the land of Asia. In the remote past, beyond the boundary lines of history, and even beyond the grasp of ethnical science, the progenitors of the men of to-day appeared upon the earth as evolutions from ancestors still more remote. From a few places these ancient ancestors spread themselves slowly over habitable lands by means of the discoveries which gave them artificial fire and agriculture in its simplest form. True agriculture endowed some of the wanderers with that power over nature which forced them to live in a fixed locality; and these latter groups have developed into the nations or the political aggregates we now see. The dominant civilizations are the forms of political life which have triumphed in the great struggle for social existence. But dominant civilizations are the very groups which are now most rapidly changing their forms. They are evolving and convolving under the play of the forces which called them into being and marked them off from the wandering tribes and races out of which they came. Let us attempt to understand the evolution and the convolution as they are now going on, not in one group, but in all. To do this let us withdraw for a moment from the contemplation of man, and regard the working of social forces as they are found elsewhere in nature.

In following this procedure we are only clinging to the method implied in the earlier chapters of this

work; and we believe that the soundness of the method will commend itself to the reader, when he reflects that the meaning of a particular phenomenon is better understood when the general law of which it is a manifestation is mastered and defined. We can better understand the social evolution of man when we first are led to understand the laws of social existence in general; and it is to these laws we must invite the reader to turn his attention.

CHAPTER VI

THE INCREMENT AND THE SOCIAL SCALE

WHEN we look upon the life of a nation as the functioning of a huge organism, the various parts of which are held together by mental forces, we regard it from a distinctly advantageous point of view. In doing so we not only enhance our conceptions of social energy and impart to them an added charm, but we are also studying society with rational and true ideas of its movements.

It is clear that the activities of a great and complex group of men are directly the result of the thought-life of its individuals. Customs and institutions, national habits and associations, trade and industry are the outgrowth purely of the mental life and character of men. Governments are held together by the thoughts — the ideas — of their peoples. Social life is thus seen to evolve from mental life.

How true is this profound fact will be seen when we reflect that it is the individual wants of men which create the vast systems of law and industry seen everywhere in civilization. The life of any nation merely reflects the mental energies of its individual members. In this fact consists the difference between one group of men and another. If the individuals of a group have many and varied desires, the

activities of the whole group will be manifold and various in just that proportion. If the desires of the individuals be simple, the group-life will be simple. In a prosperous and civilized community men desire books, costly furniture, musical instruments, and a thousand things not in demand with a poor or less cultured community. The group-life of the civilized men will therefore be more complex, more energetic, more productive of wealth, than that of the group whose individuals have comparatively few wants. In the United States, or in France, there is hence found a most complicated machinery of industry, and a national life altogether different from that of a group composed of African savages who, by comparison, have a thought-life that is very simple. The civilized group is ruled by law and order because, without law and order, the individual could not have his wants satisfied or exist in the free and ample sphere he loves.

The truth we have here stated might appear to be applicable in a special way to human societies. Yet it is really a general fact, pertaining not alone to social life but to individual living creatures of every kind. The bodily functions of a man, for example, are more complex than those of a fish because the organs of a man's body are more numerous and more varied than those of the fish. We can go farther still, and with perfect and obvious truth, we can say that one artificial machine is more complex than another because of the fact that its parts are more numerous and their functions correspondingly more manifold. Thus, if we assert, in a general way, that the complexity of anything is determined by

the number and complexity of its parts, we will be only asserting a general truth obviously applying to inanimate things of every kind, to living things taken in their individuality, and to groups of living things associated together for common and general ends.

It may be considered somewhat difficult to find an exception to this generic law of existence. It would seem to be a necessary truth that the united life of a group of creatures, such as men, would always be more complex than of a group of creatures much lower than man in the scale of thought-power. If the whole can be no more than the sum of its parts, then a number of men, with their complex brains and varied desires, should unite in a social organism very complex indeed as compared with that of creatures far lower than man in the graduating forms of bodily and mental existence.

But forceful as this conclusion may appear, sound as it may seem to us when we consider it as an aspect of the general truth we have defined, yet it is utterly false in fact. There are groups of animals very much lower than man, so far as intellect is concerned, that are yet developed in a social way far above and beyond the state of certain savage groups of men.

If we compare the anatomy of a honey-bee with that of a man, we are forced to admit that the man is in every respect the more complex creature. His bodily organs and functions, his wants, his desires, his sensations, his capacity to suffer or enjoy—all are proportionally larger, and more involved, than similar qualities in the insect. Yet when we compare the social state of a beehive with that of a

group of Eskimos, the conclusion is forced upon us that the life of the hive is complexity itself when set against the simple existence of a tribe of Arboreans.

Why? It should occur to us that we are here met with a fact of the highest importance in any rational inquiry into the causes of social phenomena. If creatures of such very simple structure as honey-bees can develop a social group of such high order as to make it an example even to civilized men, there must be some factor of social growth quite independent of the character of animal intelligence. What is it?

If the reader turns back to Chapter IV, he will find the answer. He will find that this independent factor of social life lies hidden in the fundamental law of society we have developed in our discussion of the *changing environment fixed in the unchanging place*.

The beginnings of social growth are observed in many species of animals. But the progress of that growth is arrested, as it is arrested with some groups of men, by the absence of the fixed locality needed for its development. A pack of wolves, a herd of deer, a tribe of monkeys, or a tribe of savage men, lacks only permanency of place to cause it to continue the social growth which has been already set up with tribal association. But once that this inequality is removed; once that the fixity of place is secured, the social growth of the animals involved will depend altogether upon the *quality* of the thought-life of the units—upon the degree to which the brain of the race has been developed. Here we realize the extreme importance of the principle of the fixed locality in all social considerations. It is this power over the environment which has determined the growth

of all communities; and it is the lack of this power which has left many races to lag behind, or to suffer elimination in the struggle for social existence.

This principle, then, explains the fact that we find social development of a comparatively high order in species with a nervous apparatus of a comparatively low order. If, for example, we compare the social state of a community of bees with that of a herd of deer, we shall find that the former is much higher than the latter. Incomparably so, in fact. The nervous system of the bee is a simple thing as compared with that of the deer. The bee can hardly be said to have a brain at all, whereas the brain of the deer is very like that of a man. But the social state of the bee depends altogether on the power of the bee community to live in an unchanging locality, and the social consequences of that power are, as we have seen, tremendous. In just the degree in which the bee-group has this power, which the deer-group has not, is its social structure complex and strong, and better fitted to survive as a group in the struggle for social existence.

Mere complexity of brain or nerve, mere motives of hunger and sex cannot unite living creatures into a community. It is only when these motives are found to be better served by common action than by individual action that social life arises out of mental life; and furthermore it is only when common ends are found to be best served by life in a permanently fixed place, that social life and growth become progressive. But once that this relation has been discovered, the complexity of the social growth consequent upon it will depend altogether upon the complexity of the thought-life of the animal.

In discussing social growth we must, therefore, place man where he belongs under the general laws of life. As an animal, he is limited by the same motives of hunger and propagation that limit the world of life at large. As a social animal, he cannot be set apart from that world and considered as something unique among the social groups which have arisen around him. His social life is produced and developed by the play of forces from which he cannot escape. If his body—with its natural desires and needs—is the product of an evolution over which he has had no control, there is no reason for believing that the law of his social life is any exception to the law that binds his fellow-creatures in the same respect. It will not be asserted that the human brain has been developed by any desire of man's to be possessed of an organ like the brain. Man's desires had nothing to do with the development of his lungs or his stomach. No more had those desires to do with the growth of his nerves. The human body is not the result of any design on the part of the developing race to produce the *genus homo*. The brain arose out of the vital structures produced by natural selection and preserved and developed by the same law.

A political group of men does not evolve into a form different from that evolved by a bee-group because of any fundamental difference in the laws by which both groups are carried forward. These laws are precisely the same in both instances. Social development is essentially an identical process wherever it is to be found. In some societies it has been carried farther than in others. But that is all. This fact accounts for the differences existing between the

various civilizations of men now occupying the earth, and for the various stages through which any particular group or civilization has passed within the compass of its history.

But while this is true, there is a secondary factor of social growth, the need for which has probably occurred to the reader. Why is it that one group will develop faster than another when both groups consist of similar individuals? Why, for example, will social progress advance with longer strides in England than in Germany, in France than in Austria, in the United States than in Spain, in honey-bees than in hornets? Why have bees been able to produce a social state more complex than that of ants or of wasps, when all of these genera of insects are physically and mentally much the same? This question can be answered by an inquiry into the relations of the animal to the environment. The brain of an ape is far better suited to high social development than are the nerve centres of the bee or the ant. But the social life of the insect is higher than that of the pithecoïd because of the permanency of the insect's habitation. We may now ask why is it that the insect has discovered its power over the environment while the ape has not.

We know that social organization, however low, is produced by natural selection; as in the case of the springbok, the buffalo, the wolf, and many others. In these instances social organization arises from the passive adaptation of the organism to the environment. The mere color of an animal causes it to survive when a large number of the species remain together; or a habit of signalling, when danger threatens, may act so as to preserve the groups possessing it, while those

without it are eliminated. Gregariousness is thus produced by natural selection. But we should not look for the production of this social thought-life in any circumstances which did not especially favor the group which had developed it. In some instances the social state, however produced, might result in elimination of the race. Many known races have been rendered extinct by man because of their social character.

Association, therefore, would not alone insure the preservation of any group unless the environment favored social groups. Now, the relations of the organism to the environment are infinite in number. But of this vast multitude of possible causes very few operate so as to produce a social from a non-social state. One of these causes is the accidental perception of new relations between things, and between things and the organism itself. It was thus that men accidentally discovered fire, and were led to its useful reproduction by the familiar law that pleasurable sensations are repeated. In the same way the bee discovered that it could utilize its bodily organs for creating a fixed habitation. The ape discovered neither the one nor the other. Successive changes in the environment of the ape, and in his own consciousness, have not converged to the ends to which have converged the changes in the surroundings and the minds of men and of bees. Yet it is these new perceptions, determined by the life of the organism in the environment, that have led the bee and the man in one direction, while the ape remains *in statu*. The progress of the ape, and of other animals low in the social scale, is thus stopped at its source by a simple failure to place themselves in that fundamental

relation to wealth by which social progress is made possible.

But the self-same truth is applicable to groups of similar individuals. Some groups have made discoveries of new utilities and new power over nature which other groups, composed of similar individuals, failed to find. Thus it is that honey-bees have more highly organized societies and far more efficient methods of social life than have ants or hornets, although these three genera of insects are much the same in their general structure. This is no less true of men. Berlin and Paris are cities of vast and bewildering utilities as compared with Peking and Teheran. Why? Only because Europeans have discovered new uses for their hands while the Chinese and Persians have not. Chinese and Europeans are men, alike in all essential particulars; but the contact of the latter with the things about them has increased the sum of the European's knowledge, while similar contact has not done the same for the Chinese and the Persian. New uses have been found for familiar objects in Europe. They have not been found in China and Persia. That is all.

Still, it may be asked, why cannot the ape be *taught* the use of things which are found beneficial in the hands of man? For the same reason, we may reply, that a full-grown man cannot be taught to exist under water like a fish. The man's capacity for the use of the environment in which he lives is the product of long ages of evolution. One succession of causes and effects produced the brain of man; another produced the brain of the anthropoid. Both may have sprung from the same stock; but they have developed

in different directions. If of two infants, born of the same mother, one be brought up in China and the other in France, the first will speak Chinese and the other will speak French. In old age the Chinese-bred child might learn a little French with difficulty, and *vice versa*. But, as the environment of the one was Chinese, and that of the other French, neither can use the language of the other save in the smallest quantity and in the crudest way. So, while we may teach the ape to use the instruments of the man — and this is done — it can only be done in quantities that are very insignificant. The brain of a race of apes might be cultivated by artificial selection; but that would be an experiment interesting in theory only.

Our secondary factor of social evolution is hence found to lie in the constantly enlarging number of new relations between the group and the environment — relations produced by experience which, when classified by man, is called science, art, and invention. But the progress of science and invention is due only to the multiplication of ideas flowing out of the multiplying wealth created by the multiplying wants and the increasing capacities of the units and of the mass.

In discussing the division of wealth brought about by the effect of moral sentiment upon the incremental capacity, we noted that moral thought was produced by the common needs of men. We observed that public property originated in the general wants of men, and that once having arisen, it was permanently maintained by the moral sense of all. If we now suppose that a rapidly growing group, having already developed these moral notions, should grow too large for the site upon which it lived, and should throw off

a portion of its units into another place, how would the new group, or colony, conduct itself? Experience supplies an answer to the question. With men, the colony-group begins to build an environment very like that of its group-ancestor. There are the same kinds of public and private property as in the older group. But, as was noted in Chapters III and IV, the new group begins at once to diverge and, in a comparatively short time, presents many new social characters of its own — in short, we have a new social species. This seems to be an inevitable rule with colonies of men. However stable may be the institutions of the parent-group, the colony at once leaps on in advance of its parent or parents, and a new kind of society is produced.

But this is not at all the truth with many social animals other than man. With hive-bees, for example, no new social forms are ever developed. The colony is precisely like its parent. New groups and old groups are indistinguishable from one another. All are precisely alike. Each has exactly the same social characters as the others. New environments are constructed in absolute duplication of the old. The same mental and physical life is found in all. Beehives present this phenomenon of perfect equilibrium nowhere observed among societies of men. How can we account for this important fact? Must we, indeed, abandon our assumption that human social life is no different in its essential method of growth from the social life of other sentient creatures? Is it the *moral* element in man which causes human groups to flow forwards in social evolution while that evolution in the bee is at a dead level?

If we go back to our conception of basic forces and functions, we shall find an explanation of this important difference between man and bee, and between the bee and other animals of a social kind. The purpose of a bee-group is much the same as that of a man-group. Both are held together by the needs of nutrition and propagation. Hence it should appear that their methods of growth should be strikingly similar. Is it possible that we shall find in the social life of the bee some large and conspicuous fact which will perfectly account for this absolute cessation of social development? And is it possible that when we find that fact we shall light at the same time upon the basic cause of the fact that human social evolution continues to go forward?

The conspicuous fact we are looking for appears in the very profound difference that exists in the manner by which bee and man reproduce their kind. With bees the maintenance of the race depends upon a very few individuals. A queen-bee deposits about two thousand eggs a day, during the season, and this number is more than sufficient to prevent the death of the community. It is plain that no hive could exist, that no social group could develop with fixed customs and institutions such as bees have, if all of the females were left free to propagate at this tremendous rate. But the life of the group is maintained by checking the fertility of all but a few of the entire number of the population. The arrest of the reproductive functions in the neuter bee was the one condition making it possible for a group to build habitations of a complex kind in an unchanging locality.

But even with this check upon numbers, bees mul-

tiply so rapidly that *social* propagation is frequently necessary. All that is needed to produce a new hive is that a considerable part of the old society shall find a place in which to build an environment precisely like the old. The physical and moral wants and nature of the new group are in no wise changed after the parturition. The neuters cannot redevelop their arrested functions, and the group must perish if it cannot find a suitable place upon which to build its new home. It will not be held that the social state of bees was produced by any but natural causes. All the perfected social apparatus observed in these insects has been created by natural selection. We need hardly argue this point. The cause which made the bee social is identical with that which did the same thing for man. This cause is found in the family and in the rearing of young. But with man the social state is brought about by a multiplication of numbers, whereas with bees it depends upon the very reverse fact. Bees discovered that food of a certain kind placed a limit upon fertility. This food, when the discovery was made, was the only kind available for the majority of the group. But once that the insect became aware of this important fact, the knowledge was ever afterward used to regulate population. It had so to be used if the group was to live. And as the utmost limit upon fertility was needed to safeguard the existence of the group, all but a few of the females were fed upon the substance which held propagation down to the lowest possible limit. The danger that the community might break up from want of reproducers was perfectly averted by the multiplicity of the young, any one of which could

be developed into a parent by a simple change of food.

The life of a bee is comparatively short, and its nervous system very simple. Therefore the social growth of the group would be comparatively rapid. The desires of a bee are easily satisfied. Therefore its economic life and its moral sense are quickly brought into equilibrium. Free propagation would be very repugnant to the insect-community because free propagation would mean social pain. Those bee-groups which could best control their numbers would most readily survive. In the surviving groups there would be perfect freedom for at least one of the basic functions; and the other basic function would be effaced from all but a few individuals. By this effacement alone would the prosperous life of the group be secured, and perfect freedom for social propagation set up and maintained.

There is yet another important fact to be noted before we pass on to the human part of our comparison. It is this: *All the social characters of the bee-community are acquired.* The arrest of the reproductive organs, the utilization of wax in building the habitat, the creation of a new queen by changing the food of the nascent young; the slaughter of the drones; the mortal combats of rival queens; in a word, the entire assemblage of characters which mark the group, are the products of the environment upon the plastic social structure, and of the reactions of the group on its environment — the process which we have called incrementation. What name shall we give these characters if not *social instinct*? Whether instinct be produced by the transmission of acquired

characters, or whether it be the product of natural selection through variation, need not concern us here. With bees, the swarm, or colony-group, is propagated by simple self-division, and the new group carries over to the new environment all the characters of the parent.

We have no desire to raise the question of the origin of instinct. But we may remark, in passing, that the dividing line between reason and instinct is very fine in the bee. The mental life of the bee is relatively as rational as that of man. It is sheer idleness to argue as if man were the only animal which reasons from cause to effect. We can only commiserate the very backward state of popular knowledge upon this subject. Superstition and ignorance, living through long ages, have so clouded the intellect of even cultured persons that popular speech is no more than a mass of words to almost every one of which is attached a false meaning. The majority cannot understand that man differs from other animals only in *degree*. Man, in the fatuous conceit of his own ignorance, has set himself up on a pedestal of pride from which centuries of education have failed to dislodge him. One would conceive that the brutal character of most men should have taught them that they are at least second cousins of their poorer fellow-creatures, the beasts. But only a few will be found to admit the force of the fact. Why bandy words, then, with him who, in supreme ignorance of the simplest process going on within his own body, conceives that he and his kind are a sort of divine being, when they are merely a type of a stronger and more sensitive brute?

.

We can understand how the savage can bow before his fetich, and how the boor and the illiterate can cling to superstitions which have come down to them from their ancestors. We can understand also how more enlightened men still entertain the most extravagantly false conceits of the importance of the human kind in the scheme of creation. But we cannot undertake to force upon such enlightened men an understanding of scientific truths the very elements of which are unknown to them. When, therefore, we say that bees have moral instincts and are as rational, in degree, as are men, we must not be asked to prove the assertion for the benefit of the world at large. It is a truth somewhat undemonstrable to intellects which have a very inadequate conception of the function of the blood, the structure of the brain, and that great wealth of demonstrated fact with which the science of biology has to do.

Yet the meanest intellect or the most fatuous worshipper of man will admit that the actions of a group of bees are as really rational as those of the human kind. By means of scouts a suitable location for a new home is discovered. The discovery is communicated to the swarm, which forthwith proceeds to emigrate from the vicinity of the hive. It should be somewhat difficult to prove that by "instinct" alone, and never by "reason," the bees know that a new colony is forthcoming; that "instinct" compels one of them, or a number, to search for a new site; that instinct enables the scout to judge of the adaptability of the site to the purpose desired; that it is instinct which leads the scout to communicate its discovery to the swarm, and that it is by instinct the swarm follows.

It is indifferent by what term we call the mental action by which those things are accomplished. But if similar conduct be *rational* when it is men that are concerned, it is no less rational with bees.

A group of men seeking a new habitat follow precisely the same rules of action. And when it arrives in the new locality it does not conduct itself with striking variation from the manner of the group of which it was once a part. It builds houses, produces food, and establishes institutions of a kind with those of its parent. But the difference between the new bee-group and the new man-group is this: the man-group *diverges* from its parent, whereas the bee-group does not.

And why is this the fact? Because the greatest good of the bee-group depends upon its *restriction* of population, while that of the man-group depends upon the *expansion* of population. With new groups of men social growth is facilitated, not stopped, by increase of numbers. If the life of the bee-group is threatened by such increase, the life of the human group is threatened by the *absence* of increase; and this fact is due to the fundamental difference in the method by which the organism is procreated. Every fresh addition to the population of the human group enlarges its social life and the liberty of its units. Increase of population with such a group is always associated with ideas of social good or pleasure, while any addition to the bee-group's numbers (save that of the least possible quantity) is associated with ideas of social pain.

Increase of population in human groups will receive the moral approbation of man as long as population

may grow without danger of being associated with painful experience. The increment of wealth presses upon the increment of capacity and this, in turn, reacts upon the environment, ever adding to wealth and to capacity, and ever enlarging the social and individual life of the community.

But as soon as increase of population checks this interaction; as soon as freedom to propagate results in pain for the mass; as soon as wealth lags in the process of incrementation, just so soon does the process take on a reverse action. The human group is then approaching that equilibrium observed in groups of bees. Why, then, does not human society establish that equilibrium by means of artificial suppression? It is manifest that if men were to resort to a similar method of checking fertility as that in vogue among bees, the balance might be struck. But men have not discovered such method, and they have not sought to discover it—at least for this purpose. The reason for this fact is very clear. Bee population can be maintained by an infinitesimal part of the reproductive apparatuses of the group. Prodigality of offspring is, with them, an evil to be overcome at all hazards. With men it is most often the reverse.

It is this difference of fertility which lies at the root of the fact that groups of men do not quickly reach that social equilibrium at which social progress must come to an end, and in which shall be fulfilled the ultimate purpose of the swiftly flowing stream of human social life. Our theory would be indeed incomplete did we intend to dispose of the subject here. On the contrary, this very matter of popula-

tion and its regulation is the heart of the business we have in hand.

Is the earth to be so overcrowded with human beings that the only hope for humanity lies in pestilence, war, famine, and the other horrors of history? Seeing that as nations prosper, populations increase, is our very progress destined to be our own undoing? Will men be forced to face the hideous necessity of deliberately and artificially suppressing the increase in the number of our race? Are we to look forward to a state of things when civilized men shall have become so dulled in sympathy as to use the cruel and ferocious method of the bee in order that they may be spared the more horrible alternative of indiscriminate slaughter?

It would be folly to attempt a rational theory of social life and leave out these stirring and mighty questions. We must not evade them or cover them up with an impotent agnosticism. We must address ourselves to a careful examination of the life of society and find, if we can, the nature of the future of the human race. We shrink with repugnance from the thought that the man of the future must, in the very nature of his being, become a monster without sympathy and a pessimist without hope. If all the intellectual progress of man must turn out to be a bridge upon which he is marching to the destruction of his own high ideals, we may as well drop all inquiry and cease to aspire. This is the natural conclusion to which the sympathetic man must come.

But it is the conviction of the author of this book that the outlook is not so very desperate after all.

He is convinced that the human race is not destined for either war or pestilence. He is satisfied that he understands the method by which the human population of the earth will be brought to an equilibrium in which the highest liberty of the individual, in his common human desires, will be at one with the safety of the entire race. But if we were to discuss the regulation of human population at this point we would only be anticipating our conclusions. We shall discuss it in its proper place. The conclusion to which we shall come concerning the law of human population depends upon several conclusions which flow from principles developed in what precedes. We may, however, anticipate this much—that there *is* a method by which the number of the human race will be maintained at a norm above which it may rise and below which it may fall: a *mean* number remaining the same from age to age, although the actual number may constantly vary. And this method, we hope to show, shall in no wise disturb the morals and the sympathies of any one, however sensitive or acute.

With this digression, we may now revert to our discussion of moral ideas concerned with propagation. A numerous progeny is always necessary for the healthy life of a community. For this reason moral ideas attaching to freedom of begetting offspring are very strong. The liberty of rearing a family, and freely providing for its maintenance, is inseparably associated with human ideas of *right*. Any act which interferes with that liberty is condemned as the highest wrong, next to that of interfering with the life of the individual himself.

It will be obvious, now, that if we classify the

social instincts of bees with what are called acquired characters, there will be need for doing the same thing with the social instincts of men. In this concept is involved the more remote concept of right and wrong. And more remotely still the concept of *innate ideas*. To those unfamiliar with comparative psychology it may seem an undue disregard of man's importance to say that the sense of right and wrong observed in bee-groups is essentially the same as the same phenomenon among men. The repugnance of the bee to any but the smallest possible production of offspring would certainly seem to be moral. Man's moral sense is chiefly concerned about life (with its functions) and about property. This social motive arises, without question, from the desirability of an increase in population.

But moral ideas are embedded in the purely physical surroundings of men far more deeply than the average person believes; more deeply indeed, than most moralists have ever dreamed of. *How* deeply they are thus embedded will appear, if we permit ourselves to imagine a sudden or a slow change in the environment. In regions remote from a supply of food the most civilized men will kill and eat one another without moral compunction. Murder and man-eating in New York would be considered the most highly immoral conduct. The mere thought of it is the most repugnant of ideas save that of self-slaughter. Yet murder and man-eating are condoned when practised by men shipwrecked at sea or lost in the arctics. What produces this very profound change in moral ideas? Nothing whatever but a change of environment. And if mere change of surroundings

can accomplish *that*, we need not hesitate to admit that other changes, less violent or extreme, can alter moral ideas and conduct in degrees less striking. When considering morality, then, we should not be led to place too high an importance on the nature of man himself, quite forgetting that that nature is somewhat plastic in the grip of circumstances.

So we may imagine that if freedom of begetting offspring would be seen to threaten the lives of men in general, that freedom would not be regarded with the same equanimity with which we regard it now. If freedom of begetting offspring has, therefore, a highly moral value for men, why should we deny it a similar value when it is bees that are concerned? If, with bees and men, opposite practices are found to flow from the effects of an identical function on the freedom of both, why impute a *moral* nature to the one and deny it to the other?

If it be said that the sense of right and wrong be *inborn* in the man, while it is not inborn in the bee, then we must conclude that such morality as the bee has is an *acquired* character and not instinctive. If we say that man has an inborn idea that to kill a fellow-man is wrong, although he does not know why he should have that sense, we are forced to the somewhat bizarre conclusion that bees have an inborn sense that to permit freedom of reproduction is wrong, and that they know perfectly well why they should have that sense! This, it would seem, would be attributing to bees a higher intelligence than that attributed to man. But if we regard the so-called instinct of bees to suppress population, and also that of man to encourage it, as *acquired characters*, neces-

sary for the survival of the group, our diverse conceptions of these things will have been unified.

We trust that the reader has not forgotten that all the facts of social life we have just discussed are rooted in the broader fact of the fixed locality and its relations to enlarging wealth; and furthermore, that out of this fundamental fact arises the secondary fact of the increasing capacity for the use and ownership of wealth. Let us say, rather, that the principles are co-ordinate and are themselves essentials of social progress. Let it be remembered, too, that what we have said of moral growth applies as well to intellectual and æsthetic growth — to the progress of art and science — for these things are but manifestations of the same general laws by which all social progress flows forward. Let us leave this latter view here to discuss it in another place, and turn our attention to a highly important moral phenomenon. Let us look at this phenomenon as it appears in the light of what we have developed of the law of the incremental capacity.

The phenomenon we have in mind is that vivid, if obscure, fact of social existence called "crime." The category of crime has a wide range, including acts of highly diverse kinds and of infinite degrees of importance. Different groups of men have different notions of what constitutes crime in many of its kinds and degrees. What is crime in one country is beneficence in another. We have here to offer a theory of crime on the principles we have already laid down.

The very great importance attached to crime, in all of the most highly civilized countries, should be sufficient of itself to merit the close attention of social science. But this gravity will be understood when we

look with scrutiny into the nature of crime itself and into the ideas which the word connotes. As we remarked in Chapter II, an act is right or wrong in just the degree in which it enlarges or restricts the bodily functions of life. Now the word crime ordinarily means an act proscribed by codified law and made punishable through instruments created for this special purpose. We should, therefore, expect to find that those acts which are so proscribed and punished are deemed, by the very great majority of the group, as being the most essentially undesirable of all the acts which are ordinarily deemed to be wrong by public opinion. And these proscribed and punishable acts are *all* of a character which affect life and property, either directly or indirectly. Any act which is not classified by law as a crime is held, theoretically, not to interfere with life or property — the qualification, of course, always being understood, that the intent of the doer of the act shall determine its criminal or non-criminal character.

It may seem strange to a superficial view of the matter, if we attribute the presence of crime to the same cause which constitutes the motive of progress and brings about the tendency to the elimination of crime itself. But this would appear to be the truth when we discover how the forces of incrementation are used by natural selection in social evolution. As every fresh change in the general environment of a group causes an increment to be added to the capacity of all individuals, and hence to the capacity of the group, for the enjoyment of enlarged functions, the efforts of individuals to secure comforts will naturally become more intense and

varied. Moral conceptions, enlarging with every environmental change, will tend to force a method of acquisition of comforts which shall not be repugnant to the community's sense of right and wrong. But owing to variation, there must be always some individuals in whom the increment of desire is greater than the average restraint which makes the life and progress of the group possible. These individuals will, of course, seek to gratify their desires by the easiest method which is not repugnant to their own sense of justice. This increment of desire produces, on the one hand, murderous thieves, and on the other, the great organizers and speculators of industry whose activities serve to build up the mechanism by which society carries on its economic functions. Between the manufacturer, who uses his capital to produce commodities for the public market, and the highway robber, who uses his strength to disable and despoil his fellow-man, lie all the degrees of incremental capacity which seek to gratify their enlarged desires with methods approved by the moral sense of their possessors.

The thief who appropriates the property of another man would not use this method of gratifying his economic wants could he accomplish the same result by a method easier than that of theft. He is at the double inconvenience of risking moral reprobation and severe chastisement when he satisfies his desires by a method which is repugnant to the moral sense of the community and destructive of the common integrity. Theft becomes more and more repugnant to the moral sense of the community as the economic liberties of all are increased, and as men become

safer in the possession of the things they create. Thus we observe that moral incrementation tends, through natural selection, to eliminate the practice of theft, while economic incrementation tends to produce and preserve it. Of these two forces the balance, in a growing society, must always favor the elimination of actual theft, and preserve those methods of acquisition which are not repugnant to the growing moral idea. Otherwise the society would disintegrate.

But out of the process comes another moral product — as important as the one we have just sketched. In an advancing group the number of acts classified as crimes against property must constantly enlarge. The idea of what is right, in relation to property, ever retreats before the advancing environment, and before the enlarging sphere of moral perception and concept. We are thus presented, in viewing society, with the anomaly of an *increase in crime accompanied by positive progress in morality*. The anomaly disappears when we perceive the causal relation existing between the two facts. There is no *absolute* increase of crime if we counterpoise former quantities of crime against the moral concepts of the present. On the contrary, when this counterposition is used, there will be seen to have been a very perceptible *diminution* of crime. The disparity which seems to exist is occasioned by the fact that the usual method of considering the matter is to counterpoise the present state of crime against the present moral sense. By this method, as a matter of course, the quantity of crime seems enormously increased. As a matter of fact, the relative

quantity of crime *has* increased, but the cause of that increase is found, not in any enlargement of the criminal performances of men, but in the enlargement of the category into which acts, deemed criminal, fall. In other words, the *definition* of crime has changed, and is changing rapidly in response to the process of moral incrementation.

The familiar law, whereby the growth of a vital organism is more rapidly accelerated as the organism approaches maturity, is found in social growth also. It will not be denied that the advances made in the moral codes of Europe within the past three centuries have been greater than for any similar previous period. And the advance in these codes within the century just closed has been incomparably greater than that of the two preceding centuries. But there is a causal relation between this fact and the further fact that the environmental change in Europe, and in European colonies, has been proportionally large. The mechanical and industrial achievements of the Nineteenth Century are incomparably more, in the mass, than all the achievements of human history before that time. When we consider that the moral increment is ever in advance of the economic environment, while a group is growing, we can understand the vast changes through which men's ideas of right and wrong have passed within the comparatively short time of one hundred years.

Why did not the nations of Europe progress with this rapidity in the centuries before the Renaissance? Manifestly because they did not possess the power of causing an alteration in the environment of sufficient importance to produce a rapid incrementation. There

was nothing mystical in the acquisition of that power. It was simply the slowly growing perception of new relations to the environment. If these had not been discovered, European groups would not have developed into the nations they are now. They might have remained for ages in the simple state in which China has remained. If bees had not discovered their power to build with wax, they would not have developed into their present complex state. But as Europeans progressed in discovery, social progress was as inevitable as was the progress of the bees. With that progress is involved every change in the opinions of Europe, and its daughter colonies, bearing upon the question of crime.

We have dwelt upon crime in its economic bearings because the very great mass of crimes committed and discussed consists of offences against property. Crimes against life are most frequently traceable to causes concerned with property. But when these causes are absent, the only others observed are those which involve ideas of honor or ideas of sex. Instances of the first kind are derivative from the desires which flow from the satisfaction of bodily wants. These are accounted for by the same causes that account for the crime of theft in all its manifold forms. And crimes which are caused by ideas arising out of sexual desires are explained by the fact that the increment of capacity for the enjoyment of the reproductive function always leads the individuals possessing it to gratify their desires by the easiest method which shall not be repugnant to their moral sensibilities. Crimes which spring out of intemperance are economic in their root, and are explained by

the pressure of the incremental capacity upon the individuals whose moral nature is not sufficiently powerful to overcome the physical desire.

If we admit that this action of incrementation is the force at work in social progress, we shall expect to find divergence in the moral life of nations as well as in their economic life. We should find wide differences in the ideas of various groups as to those acts which are classified as criminal. This we do indeed discover when we place the moral notions of younger and older nations side by side. The moral sense of a younger community is always broader than that of the older. Europeans regard Chinese concepts of crime with horror. Yet they regard their own status as more immoral than that of the Chinese is regarded by the Chinese themselves. When Chinese ethics is the measure, there is far less crime in China than there is in England; when the measure of English crime is English ethics, there is more crime in England than in China.

The cause of these differences lies in the fact that China has reached a state in which the balance between ethical concepts and economic environment is comparatively stable. But that it is not perfectly stable is made manifest by the fact that in China crime still exists. In any group in which these two forces are in stable equilibrium, the phenomenon of crime cannot appear. In the only groups we know to have been thus balanced — those of honey-bees — there is no crime. Bees commit none of the predaceous acts — whether economic or sexual — that are observed in the conduct of the animate world at large, men included. There can be no crime among them because

there is no increment of desire to satisfy. There is no increment because the nutritive and reproductive functions of each are satisfied to the utmost limit possible for each, and at the same time compatible with the preservation of the group in its entirety. As each individual is the perfect economic equal of the others, and as the economic wants of each are perfectly satisfied, there can be no motive for predaceous acts against property. Restriction of the reproductive function to the lowest degree having been found necessary to the very life of the community, there can be no motive for predaceous acts against sex, nor is there, indeed, any desire or capacity for such acts. The life of the drones is sacrificed to the common good because, having performed their only function, they are only a menace to the group. But this act against life is found beneficial and self-preservative, not to any particular individual, but to all. Bees are, therefore, perfectly moral.

In order to reach this state of perfect equilibrium, the bee community must have passed through a process of incrementation precisely similar to that described in the beginning of the present chapter. It is not rationally to be assumed that a bee community, with all its complicated relations to the environment, and with its complex mechanism for filling its social functions, sprang into existence in a single moment. As we have already said, it is not necessary to argue that the social state of bees is the result of comparatively slow processes of evolution by natural selection. The rapidity of those processes may have been, and probably was, greater than that observed in human social evolution. But the forces could not have been

different in the two instances. We must suppose that bees, in the long evolution of their social state, were not insensible to notions of public and private wealth. The social phenomena of their lives disclose moral perceptions of a comparatively high order. These perceptions may be less complex than those of men. But if it is denied that the community of spirit found in the economy of the hive partake in any degree of the moral character, it cannot be denied that the same phenomena would be classified as being distinctively moral if they were observed among men. And in so far as any such phenomena are observed at all among men, they are due to precisely the same forces to which they are due in bees.

The tendency of the action of the incremental capacity among bees would be to produce a rearrangement of the categories of wealth as that rearrangement is observed in human societies. That tendency would be to displace increasingly large numbers of things from the private category into the public category. That bees could note the benefits derived from this change will hardly be disputed when we remember how thorough is their appreciation of the rights of the queens, of the drones, and of the workers. Experience taught them that the larger the category of public wealth became, the larger would be the comforts of the mass. With this change came a corresponding increase in the capacity for use and enjoyment. The forces to which freer play would be given by this process would lie in the psychic field and would consist of desires for larger environments. This would result first, in the increase of the category of public wealth and, secondly, in

the increase of the quantity of things making up individual environments. From this action we can see how there would result a twofold limitation; first of the private category (resulting from an increasingly large number of things passing from it into the category of public wealth); and secondly a limitation of the quantity of things attached to the environment of any particular individual. But this action would be accompanied by a very significant change in the method by which the common product would be distributed — namely, a change by which the quantity of the personal environment would increase for an ever-enlarging number of individuals.

In order to render these somewhat abstract and apparently contradictory propositions clearer, we will separate them, as far as is possible, so as to describe the order in which the continuous rearrangement takes place.

1. Increase of the *kinds* of public wealth accompanied by increase of the *quantity* of private wealth.
2. Limitation of private wealth accompanied by limitation of the *quantity* of private wealth making up the environment of particular individuals.
3. A more equal diffusion by which those things yet remaining in the private category are attached in *less* quantities to a comparatively small number of individuals, and in *greater* quantities to comparatively large numbers of individuals.

But from this progressive method of diffusion a remarkable effect would necessarily flow. It is this. The tendency would be toward a state in which *the property right would disappear altogether* except in its aspect as a public function. Indeed, given the

forces—ever at play in greater freedom—of the increasing psychic capacity, subject in its action to the moral limitation, and no other state could possibly result. When that state should have arrived, as we see that it *has* arrived in groups of bees, there could of course be no longer anything which could be attachable to the individual. Wealth, having been first of a categorical nature which applied only to the individual, would now have been transformed into a categorical nature which applied only to the community. The cycle of change would have carried all things—at first in the private category—over to the public category. The dual character of wealth would have changed again into a singular character, but this last character would be the extreme opposite of the first.

This fluxion has actually taken place in groups of bees—unless we assume that bees have not evolved from a non-social to a social state, or that they have not evolved from a social state which was very much less complex than that observed in honey-bees at present. In such societies there is not now anything that is purely private property. Private property cannot exist among social bees—at least of the commonly observed type—because such category is to them suggestive of the highest wrong. Moral concepts are in perfect equilibrium with the economic system developed by their necessities and activities through the forces of the incremental capacity. Any attempt to reinstitute private property, or to make things attachable to any individual environment, would be resisted to the last effort, because such re-institution would result in the destruction of the

equilibrium, and hence of the social system which experience has taught is the most salutary and the most free.

So long as the natural supply of food continues in quantities ample for the sustentation of social life, private property can never again arise among hive-bees. That it may not seem absurd to speak of the private and public wealth of so small a creature as a bee, we need but call attention to the fact that the habitation of a solitary bee is as sacredly its own as is that of a man, and that it is defended with as much spirit and as much affection. And while this is perfectly true, it may be noted, also, that the wars between communities of bees are in no wise different from wars between nations of men — unless we except the ferocious and useless extermination often practised by men and never practised by bees. If the supply of food, however, were so severely curtailed as seriously to disturb the economico-moral equilibrium, private property would certainly arise, and we should expect to see that groups of bees would return to the state which had existed before the establishment of that equilibrium.

In societies of bees the increment of capacity has acted only in an economic way, and there is found no collateral development of art and intellect. It is true that bees show architectural art in a very high degree, but there is here no appreciation of the æsthetic for the very sake of the æsthetic itself. Art and economy have not been differentiated. The beauty associated with the industrial products of insects is derived from forms of structure directly serving the purposes of pure utility. But if art or intellect have not ad-

vanced with the economic growth of social bees, it is because of the comparatively simple nature of their nervous system. The thought-life of the individual insect is carried on by an apparatus less integrated and centralized than that of the mammal. Coördination of ideas, owing to this diffuse character of nervous function and organ, is less complex than that found in the nervous action of mammals. Therefore art could never arise beyond its purely utilitarian aspect. Bees possess bodily organs which could be utilized for the creation of works of art of a beauty proportionate to that of the honeycomb; but these instruments are never used for this purpose because there is no æsthetic capacity which such use could satisfy.

Because of his highly centralized ganglionic apparatus, man's ideas of comfort are proportionally more complex than those of bees; and because of his social state they are infinitely more complex than those of other high mammals. Comfort-ideas of different groups vary in complexity because of various degrees of power to alter the environment. But as æsthetic and intellectual ideas arise out of these bodily desires, we should look for the highest art and the highest intellectuality in groups which had developed ideas of comfort to the highest degree. And these two orders of facts are always found together, as a matter of observation. For although the Greeks affected to despise utility, they despised it only as an end toward which to direct the highest efforts of genius. Their economic life had kept pace with their æsthetic and intellectual progress. Their trade was immense, their inventions were numerous and highly useful, their private fortunes were large, and the form of their

government was pseudo-democratic, or at least the power of the tyranny was limited more in them than in other political groups of their time. If the artists and the philosophers made a special effort to condemn utility, it could only have been because economic ideas were by no means weak among Greeks. In the present day we find the same tendency among professors of art, if not among professors of science. But it should be borne in mind that the Platonic method has been replaced by the Baconian method in intellectual progress.

If the Greeks had not invented mechanical instruments, they could never have produced the highly finished works of painting, sculpture, and architecture, whose existence is attested by the remains of Grecian civilization. The modern painter who despises the chemist, the mechanic, the weaver, and the utilities created by them, could never produce his pictures were he not first supplied with tools; nor could he have acquired the capacity for the use of the tools had not the chemist, the mechanic, and the weaver wrought before him. Among the Greeks, Polygnotus and Zeuxis, and other earlier masters, used but four colors. These were white, red, black, and yellow. According to Cicero, Grecian art in painting was perfected in the time of Protogenes, or about one hundred and fifty years later. By that time the number of colors had been increased indefinitely, to such an extent that modern painters, probably, do not use as many colors as did Protogenes or Apelles. Greek painting, as found in its decadence in the ruins of Pompeii, used not less than thirty shades derived from six basic colors.

It will be observed that Greek art, progressing by incrementation, was limited by the industrial life of the group. In so far as industry could offer tools, it was possible for the æsthetic increment to alter the æsthetic environment. Thus Greek painting, sculpture, architecture, and poetry advanced together, and were carried to a state scarcely inferior to that of these arts in the present time. Yet if we compare the æsthetic ideas of modern Europe with those of ancient Greece, we will find that, in the total, they are vastly more complex, and greater in quantity. Compared with the compositions of modern musicians, the music of the Greeks was crude. In the high excellence of modern graphic and plastic art, in modern decoration and design, in the adaptability of beauty to use, and in the common and individual wealth of everyday life, the modern European city is a complex of æsthetic possession and capacity with which to compare ancient Athens would savor of irony. This truth will be the more clearly perceived when we consider how the incremental capacity, ever at work creating new utilities, rearranging the categories of wealth and changing the method of diffusion, has increased the æsthetic ideas of the masses and has surrounded increasingly large numbers of individuals with æsthetic environments unknown to ancient peoples.

If we examine into the nature of social progress, we shall find that it consists of an increase in the quantity of wealth not for the use of the few but for the use of the many. A group in which usable wealth is attached in very large quantities to a few individuals must be backward, weak, and ignorant, as

compared with a group in which the reverse is the truth; and it will be backward, weak, and ignorant in just the degree in which its wealth is so diffused. As use begets capacity, the total capacity of a group will be high or low according to the degree of diffusion. Any action which tends to bring about a more equal division must be progressive action. But the æsthetic and intellectual capacity of a people is increased only by an increase of use through possession. And as the basis of æsthetic and intellectual capacity is possession of the things used to develop that capacity, the basis of æsthetic and intellectual progress must be *economic progress*. Furthermore, as the force which causes economic progress is, as we have seen, moral, we are led to the conclusion that the four processes which constitute social progress—that is, the economic, the moral, the æsthetic, and the intellectual—are really only aspects of one continuous process the roots of which are embedded in the process of incrementation. And this process is itself caused by the power of the group to alter its environment without changing its place.

If we ask whether England has made any social progress since the time of Henry VIII., the answer will be affirmative. Why? Not because the wealth of England has increased, but because that wealth is more equally divided than was the quantity of the wealth which England possessed four centuries ago. If it were possible to conceive that all the wealth of England should be in the possession of a few individuals who, for any reason whatever, should refuse to permit its general use, England could be conceived to be in a state beside which the England of four

centuries ago had been comparatively free. But the bare suggestion of the idea is sufficient to suggest the impossibility of its conception. England has progressed *because* the multiplication of wealth has necessitated a rearrangement in the method of its division. The environment of a mere mechanic of the present day is such as all the power of a Henry could not accumulate in Henry's day. And the same logic applies with stronger force to the progressive state of new groups which have sprung from England as colonies. The prosperous clerk in America may possess economic, æsthetic, and intellectual comforts which not even the power of the greatest monarch of Europe could have secured a century since. Wealth has not only increased absolutely but relatively. The position of servant and master is interchangeable among individuals. And in democratic communities political progress has, of necessity, followed economic progress. The diffusion of political power must ever adjust itself to the diffusion of wealth. The modifying force in each process is the growing moral idea; and as the economic increment ever presses the moral increment before it, political institutions must change to meet the newly evolved concepts—must change, first in substance and subsequently in form.

We have yet to consider the last phenomenon of social life we shall examine here as related to the action of the increment of capacity. That is the disappearance of certain intermediate forms of social groups. An increase of population in a prosperous society would cause progressively larger increments of capacity until the pressure of population would restrict economic comforts and cause the individual

wealth to contract rather than expand. This phenomenon could be due to no cause other than one concerned with the supply of food in a warm climate, or with supply of food and shelter and clothing if the climate were cold. Such groups would, therefore, alter their environments in correspondingly decreasing degrees. The diminishing return from agriculture and from productive processes of every kind would progressively decrease the increment of capacity, and by this action the group would approach an equilibrium between its moral concepts and its economic mode of life. But this equilibrium could not be established because its essential condition would be absent, that condition being a plentiful supply of the very food which, by pressure of increasing numbers, would be made relatively smaller. The balance could not be struck until the decrease in food, or the peculiar method of its division, would so act upon the reproductive organs of the race as to arrest their development. But this process does not take place with men. When the quantity of food is restricted, the vital organism of man is changed only in one way. That is, he becomes weaker, not in his reproductive functions, but in all his functions. Thus the society loses in the efficiency of the labor, and in its quantity of labor power, of all of its integers. If the pressure become so great as to leave only enough food for the bare subsistence of the worker, the population would fall below the level possible for the highest and most efficient production. This would cause larger shares of product distributed to each individual, and the result would be another increase in population beyond the normal number which the food supply could support.

The society would in this way present the phenomenon upon which the academic "law of wages" is based. But that law is explained by the fact that the group is seeking an equilibrium, which it cannot attain so long as the reproductive forces continue to act in freedom when the food supply is sufficient. The society thus oscillates above and below the level at which it would rest permanently if the number of the population could be brought into a balance with the food productivity of the workers. But in a society such as we have here supposed the level would constantly shift to lower and lower norms of population. Were the food supply constant, the society would remain in equilibrium by the process of oscillation described above. Its economic increment would rise and fall with the quantity of population. The increment could again become progressive only by inventions which would make intensive cultivation practicable, or in lieu of that, by inventions which would enable the group to increase its food supply by international trade. But if no such new discoveries of relations to the environment were made, as in the case of China, the group would remain indefinitely in the very state in which we see that China has remained for centuries.

But should the absolute quantity of the food supply become progressively decreased, the level toward which the population would tend would be lowered progressively, and the absolute number of population would progressively decrease. We would then see the reverse of the process observed in a growing society, or in one word, *decay*. Such a society, if not in isolation, would be certain to disintegrate very

rapidly by emigration to more prosperous or younger contiguous groups. It would not be necessary, for the encompassment of its death, that its numbers be reduced until starvation would put an end to their activities. Disintegration would take place if contiguous social environments offered any very appreciably great advantages. If this did not occur the society would be subject to quick elimination by stronger neighbors with more efficient instruments of war.

These laws of social life, while generally manifest, are not so clear when applied to certain well-known facts of history, as, for example, the disintegration and death of ancient Rome. Rome was quickly eliminated by close contact with the great peoples of the north and their superior economic system. The barbarian groups of Europe never had, so far as we know, the rigid system of slavery practised in Rome and other more civilized groups of the south. Communal and feudal systems existed in full force as early as the time of Cæsar. Even in Britain this system prevailed, and the economic system of continental Europe was more efficient and freer than that of the islands. The so-called barbarians had developed agriculture and trade to a comparatively high degree. They bought peace from Rome by the payment of vast sums of wealth which Rome could not herself create.

The decline of Roman military power was inevitable under these conditions. Rome's military control over the north was a thing of the past long before the accession of Hadrian. The causes of this decline were apparent to Suetonius who, if he did

not describe it with the precision of a modern economist, hinted at it broadly. Political groups with a comparatively free system of labor and production, which could support Rome in idleness, could not be forced to submit to Roman rule when Roman methods of aggression and defence were theirs to seize. They had a greater man-power than Rome; and they created their own wealth. Thus Rome was beginning to decay from the moment it sought to extend its empire over groups which were not encumbered with its own rigid system of slavery. Roman conquest was dead centuries before the peoples of the north had ever heard of the Christian religion and its ethics. If Christian ethics quickly overspread Europe afterwards, it was because the economic state of Europe was freer and richer than that of the Romans to whom Christian ethics, with its ideas of equality, was repugnant. And if Rome was christianized herself, it was because the economic superiority of the north had compelled her to abandon her methods of conquest.

How will this view modify our conceptions of European life after the death of Rome? It has been the custom of historians to discuss with much gravity the *effect* of the fall of Rome on modern Europe, just as they discuss the *effect* of the fall of Napoleon on European political life. The truth is that the fall of Rome had no *effect* whatever upon anything. We may as well discuss the effect of the old system of Ptolemaic astronomy upon modern telescopes or spectroscopes, the effect of the Platonic philosophy on the inductive method of science, or the effect of the passing of the guild system on the modern

factory system of industry. The two orders of things are not causally related at all. European progress was altogether independent of Roman military conquest or Roman life. Rome was simply eliminated when she came into contact with the more efficient economic system of the north.

Historians treat of European life, after the fall of Rome, as if Europe had been in the grasp of some mysterious power which played with its destinies in some inscrutable fashion, to the wonder and amazement of the student of history. They divide modern European social life into two periods: first, the Dark Ages; secondly, the Renaissance and its subsequence. For nearly one thousand years, they say, Europe lay as if under the influence of some withering blight which chilled the motives of progress at their very sources. Then, suddenly, the blight lifted and *voilà!* the Renaissance! This view of social progress is about as logical as would be that of one who, seeing an individual in infancy and again in maturity, should forthwith express amazement, and attribute the change to the operation of some miraculous cause. This is not customarily done because the phenomenon of slow growth in vital organisms is familiar to everybody. And he who watches the progress of Europe from the fall of Rome to the Renaissance will be no more moved to attribute the change to some suddenly acting mysterious power, than he is to attribute a growth of beard on the face of a man to the same cause.

The fact is that the Dark Ages and the Renaissance have no existence whatever save as false ideas in the minds of those who use the terms. There were

no Dark Ages and there was no Renaissance. There was no blight and there was no restoration. These ideas are pure delusions. How were the centuries between 500 A.D. and 1400 A.D. *dark*? Dark, truly, as compared with the nineteenth century, but by no means dark as compared with the first century B.C., or with any other period in any other civilization before the fifteenth century A.D. There was no slavery of the antique kind in Europe during the centuries in question. There had never been, except in the old civilizations. The Middle Ages did not produce an Aristotle or a Phidias, and we shall see why in the next chapter. But was the social system which could produce the schoolmen so very inefficient as compared with the system which produced the philosophers who lived in Athens before the age of Pericles? Mediæval Europe produced the Venerable Bede, Rabanus Maurus, Remigius of Auxerre, Alcuin, the Abbot Fredegisus, Scotus Erigena, Anselm of Canterbury, William of Champeaux, Bernard of Chartres, Roscellinus and Abelard, Gilbert of Poitiers, John of Salisbury, Alexander of Hales, Thomas of Aquin, Henry of Ghent, Roger Bacon, Duns Scotus, William of Occam, and other metaphysicians infinitely more acute than was ever an ancient Greek. As we approach the fourteenth century the intellectual movement in Europe assumes brilliance and proportion. Most of the modern sciences had been germinating for centuries, while in Cordova the Saracens had vastly improved upon the traditional science they had carried over with them from Asia.

But if Arabic science flourished in Europe it was because of *European environment*, for we see that

European science was developing rapidly and independently in close contiguity with that of the Arabs in Spain. The brilliance of the mediæval schools can hardly be called inferior to that of the Athenian schools. Experimental science flourished in mediæval Europe as it never could have flourished in Greece or Rome. The ages which could indulge in an intellectual debate beside which that of Greece was insignificant; which could preserve all the ancient books we now possess; which could develop the Aristotelian philosophy so as forever to set at rest the question of Nominalism and Realism; which could bury a Thomas Aquinas with imperial pomp; which could originate the methods of science which were soon to flower and bear fruit in Leonardo da Vinci, Aquapendente, Copernicus, Guttenberg, Kepler, and Newton, cannot truthfully be called *dark*, whatever else may be said of them.

But, it may be said, the Church of Rome held sway over the minds of the people. True, the Church of Rome was powerful. But it was powerful because the people believed its dogmas. Was the progress of ancient Athens in art and intellect less forward because Athenians believed that Zeus ruled the sky? What had their belief to do with the quantity of wealth which they produced? What had the popes to do with the economic system of serfdom in Europe? The church taught that pure slavery was immoral. What influence could it have had on Europe if it had attempted to replace the serf system with the slave system? The serf system was there before the Church came. A religion which condemned slavery would be acceptable to a political group, or any

number of allied political groups, in which slavery did not exist. And when we consider that the liberty of the serf was increased, not with the spread of Christianity, but with the increase of the wealth of Europe, we begin to perceive the true relations of wealth to political conditions. The Christianity of Europe has changed in the past ten centuries. Has the change been caused by any social force exerted by the ethical teachings of Christianity? Could the force of those precepts be understood by a lord or a serf? Do lords free their serfs because Jesus tells them to practise the "Golden Rule"? Could the preaching of the golden rule in ancient Athens or Rome bring about the decline of the militant state or the abolition of slavery? We know very well that it could not. On the contrary, we know that it brought about the death of those who preached it. And we know, furthermore, that Rome's military power was destroyed by the economic strength of the pagan peoples of the north.

We hear much discussion about the Dark Ages and the Renaissance of Europe. We hear very little about the Dark Ages and Renaissance of ancient Greece and Rome. Yet if there was a social blight on Europe in the ten centuries of the Middle Ages, there was no less a blight upon Greece in the centuries called the heroic age. And if there was a rebirth of art and intellect in Europe, there was also a rebirth in Greece and Rome. But the intellectual and æsthetic movement in Greece was a *birth*, not a *rebirth*, and the same is true of the intellectual and æsthetic movement of modern Europe. Greek ideals could not influence Europe until European wealth

had created ideals of its own. Nor could Egyptian or Hindoo or Assyrian ideals influence Greece until the economic growth of that society made such action possible. If we discuss Dark Ages and Renaissance with concern to modern Europe, we must discuss them also with concern to every political group in human history. There is no mystery in these things at all.

The process of incrementation, in its four aspects of economic, æsthetic, intellectual, and ethical relations, is quite as mechanical as any of the processes, vital or psychic, of which it is the sum. Progress, as we have seen, is no more or less than the action of the increment of capacity on the environment. The enlargement of capacity, consequent upon the acquisition of things, is not produced by the existence of any intelligent purpose in the mind of the individual whose capacity is enlarged. Given the circumstance of the increment of possession, and the increment of capacity follows as a natural and inevitable effect. No analysis, however close, can reveal any but a mechanical nature in the process. It is in no wise controlled or influenced by the will of the individual more than any other function he possesses, bodily or mental. To hold otherwise would be equivalent to holding that by the exercise of the cerebral function one can at will perceive that axiomatic propositions are untrue, or that the assimilative functions of the body can be changed by the process of assimilation into functions of excretion.

We are thus led to the conclusion that social growth is a process entirely independent of man's volition. Societies do not present the order observed in progress because it is the desire of men that they

should progress in this way. If we are prepared to admit that man's body has been produced and developed by the play of blind forces through the law of natural selection, we should be prepared to admit that societies are developed by the same causes. If man's brain is not the product of the will of the shifting mass of animals out of which he has emerged, no more can society be said to be the product of forces which are more intelligent. If blind force can be found to account for the structure of man's body and the function of man's brain, blind force must be found to account for the structure of the complex associations of men which are called human society.

It matters little whether this theory shall be acceptable to the minds of few or of many. To those who, as men claiming to be teachers of social science, yet reserve a little of their opinion, expressed or avowed, for the entertainment of views which give man a separate place in the economy of things, we say that this reserve is as unscientific as any other delusion. It can serve the purpose of human knowledge no more than can any other guess. It should be classified with similar reserves held in all times by men who leave go of ancient beliefs with reluctance. Whatever vitality it may seem to possess is due, not to any grounds of probability, reinforced by human observation in any other department of science, but to the inability of those who hold it to rid themselves of the yet remaining touch of the old and surmounted method of deduction. And it is explained by that variation which is found in the intellectual (as well as moral and economic) capacities of men in the compound process of incrementation.

CHAPTER VII

SOCIAL KINETICS

WHEN the historian undertakes to write the life story of a nation, he proceeds about his work according to a fixed and definite plan of action. His purpose is to tell the story of the nation's life from its beginning to its end; or, if the nation be still alive, to tell that story from the beginning down to the present time.

But the beginning of a nation's life is never so definite, either in time or in place, as the historian would naturally desire. He finds that to understand the motives, or the thought-life, of any people, he must go back a step or two beyond the date at which the nation can be said to have an independent existence of its own. He must trace the stream of its life back to its national childhood, and endeavor to connect the earlier events of the nation's history with those which come later. In other words, his purpose requires him to show in his narrative the continuous and unbroken chain of cause and effect, the contemplation of which shall be the contemplation of the nation's life itself.

Such, too, is the method of him who would relate the life story of a man. The biographer cannot begin his work with the fully matured individual. He must account for the conduct and character of the grown man by inquiring into the character of the youth and of the child. And he finds that this

inquiry will carry him beyond the existence of the individual himself to the character of his parents, or even of his remote ancestors, so far as can be known.

All these facts are only conclusive evidence of a broader fact underlying existence of every kind. They are evidence of that continuity of action, and of that contiguity of things, seen everywhere in the scheme of visible and sensible creation. The history of one man is inseparably bound up with the history of other men; and the life of any particular group of men cannot be set apart, historically, from the lives of other groups, near or remote in time or in place. In a word, the first duty of the historian is to find the *elements* of the national life he has undertaken to describe; and to accomplish this end he is perforce required to go back into the past as far as may be, and to master, with as much accuracy as possible, the nature of the sources from which the subject of his narrative has sprung.

The inquiry we are making in this book is not concerned with the life of any particular nation, or political group of men; nor yet with the life of all the nations of history taken together. Starting out with the question, What is the end of social action among men? we found that to answer it we must reduce social action to its elements. But in doing this we were inevitably brought into contact with social life among animals other than human. We found that as we proceeded with our analysis, the scope of the inquiry was ever growing broader; that its boundaries were ever enlarging; and we were at last brought to the conviction that if we are adequately to understand the principles of human society, we can understand them

only in the light thrown upon the subject by principles applying not only to human society itself, but to society of every other kind. In thus arriving at the *elements* of social action among men, we arrived also at the elements of social action in general; and from these elements are derived the principles which underlie the action of society wherever it is found.

It is manifest to the reader that the foregoing chapters have been devoted altogether to the making of an analysis such as we have described above. And we may say here, with every assurance of certainty, that further analysis can help us in no manner whatsoever. Search as we may; examine into the physical and mental anatomy of living creatures with the most careful scrutiny; lay open to view the causes which bring about the association of any species of animals into a definitely moving group, and there will appear no elements of action, no principle of social growth, other than those laid down in the preceding pages. We have discovered that all living creatures combining in a group, the existence of which secures for the individual a freer and ampler life, are moved to do so by the basic forces and functions of all living structures — the motives of nutrition and propagation. We have seen that some groups are held together in consistent masses by a complex life of the mind issuing out of the nervous apparatus developed in the evolution of the race; and that this thought-life determines the character of the outward life of the group. And we have seen, furthermore, that the quality of the thought-life of the group, and the complexity of the artificial environment surrounding it, are interdependent one upon the other.

Such are the only elements into which social motion can be analyzed. There are no others.

Proceeding from our elementary basis, we have learned how life forces unite into certain principles of action. These principles we discussed when treating of the transmuting environment in the fixed place, of the increasing capacity issuing out of it, and of the involutions and convolutions of a social group arising from the play of the thought-life and the environment functioning together. These are the fundamental *principles* of social life, and there are no others. All the phenomena of a highly developed, freely moving society, whether human or not, can be brought within the scope of these fundamental conceptions.

As we rise in the scale of social life, we find that the scale is not based upon the same facts as is the scale of organic life itself. Looking at life itself, we note that its scale is determined by the vital apparatus of the organism. Thus we can trace the graduation of living forms from man, the highest and most complex of the mammals, down to the single-celled organism which seems to be no more than a mere tiny lump of watery matter with no organization save that of the simplest conceivable. Between the two extremes — man at the apex of the pyramid, and the moneron at the base — lie all intermediate forms of life, one succeeding another in imperceptible gradations, clearly showing forth a definite and conspicuous order of arrangement, and suggesting a cousinship of structure which occurred to the mind of Immanuel Kant, and which was demonstrated by the minds of Charles Darwin and Alfred Russell Wallace.

Such is the basis of the life scale. But the basis

of the social scale is something very different. That scale is dependent, in one way, on the vital apparatus of the individual organism, and it is independent of it in another. The basis of the social scale is therefore twofold. Its double aspect is found in the organism of the individual — on which the life scale is based — and in the *spatial* relation of the social group to the environment. If the group moves about from one place to another, it is low in the social scale. If it lives in one fixed place, it is high. Thus it is that a group may be very low in the life scale, while it is very high in the social scale, and *vice versa*.

Having understood these truths in all their significance, we are now prepared to study man and his institutions in the light thrown upon our subject by this new and forceful method; but before we open up this fruitful study, let us lay down our fundamental conceptions in a definite and orderly manner. Leaving out of the account all considerations of the social scale, save in so far as it applies to human groups, we can draw up our analysis into a synthesis of four fundamental laws of social life under which may be grouped all the phenomena of human society. These laws are as follows:—

I. THE LAW OF INDIVIDUAL PURPOSE.

The individual man, living in a group of similar individuals, is moved to action, first, by his desire to secure food for the sustentation of his body, and, secondly, by the desire in the gratification of which the race is maintained.

II. THE LAW OF MORAL PROXIMATION.

In pursuing this twofold purpose the individual finds that his actions are constantly limited by the

conduct of similar individuals seeking to gratify similar desires. Sometimes this conduct is helpful to his purpose, sometimes it is hurtful. When it is helpful he experiences pleasure; when hurtful, pain. Conduct of the first kind he deems bad, or wrong. But he finds, again, that a certain measure of restraint laid upon the conduct of all is helpful for the purpose of each. And within that measure, whatever helps the pursuit of the purpose is right; whatever hurts it is wrong. But from this moral law there flows another. *The moral value of any act is measured by its proximity to the very purpose itself.* The importance of an act, in its rightness or wrongness, increases as it helps or hinders the pursuit of the individual's happiness. If the act lies close to life and its functions, its moral value is high; if the act lies remote from life, its moral value is low. So it is that *murder* is deemed the highest wrong, because it puts an end at once to pursuit and purpose alike; while *charity* is deemed the highest good, because it relieves the individual of the necessity of pursuit, and gives him the power of living without labor.

III. THE LAW OF THE CUMULATIVE ENVIRONMENT.

The purpose of the individual is best served when the group of which he is a part lives in a fixed place, upon which accumulates the wealth produced by social energy. This relation to the environment is a necessary condition of social progress, economic, moral, intellectual, and æsthetic.

IV. THE LAW OF THE INCREMENTAL CAPACITY.

The individual secures his purpose by attaching to himself as much of the total wealth of the group as the common moral force will allow. His capacity

for *use* of the wealth appropriated depends upon the length of time the wealth has been in his possession. But his *psychic* capacity for ownership is not thus limited. The only limitation of the psychic capacity is the limit of all the wealth appropriable. But the *action* of the psychic capacity is limited by the moral sense of the group, which sets up a rearrangement of wealth, dividing it into the two categories of private and public property. To this process, functioning in the environment, we have given the name of "incrementation."

These are the four great links in the chain of human progress. They are the foundations upon which human civilization rests, and the forces that are moulding the rising structure. It is the purpose of the present chapter to consider the *direction* in which these forces are carrying society forward and the *end* toward which the motion tends. We have, therefore, entitled this chapter "Social Kinetics." Kinetic energy is energy translated into motion, so that the term "social kinetics" may be used to describe social energy in motion. What is the direction of this motion, and what is the nature of its end?

Of course, if we exempt human society from the domain of natural law (and by that term is meant the regular sequence of natural cause and effect), there is no answer whatever to the question — at least no answer such as human ingenuity can *demonstrate* to itself. But even if no such contention is made, the outlook would be scarcely more promising if we had no grounds for knowledge save those found in human history thus far observed. We can go farther. We can say, without fear of tumultuous contradiction,

that human history gives us no grounds whatever for the belief that human society is tending toward any end at all. We have seen what the two great expositors of social philosophy have accomplished when they have dealt with the subject with no basis of prevision beyond social man himself. Mr. Spencer, equipped with the profoundest intellect of the ages, has split upon the rock of his own theory of individuation. Karl Marx, who has taken the opposite theory of socialization, leaves his philosophy with such tremendous gaps in it that we are compelled to place him altogether in the ranks of the reformers and leave him there — the best of *socialists with a programme*, but very little more.

The author of this book is fully alive to the difficulties which have confronted his predecessors, and he is no less aware of the genuine bitterness of feeling prevailing between the two hostile camps. But he is convinced also that hostility is distinctly out of place among scholars. Losing our temper will never enable us to perceive the true motion of the stars. All we do here is to offer a new method of accounting for human facts. We are not in love with our theory, on the one hand, and we have no programme to offer on the other. The author is utterly indifferent to the reception his theory will win from the public, — if it win any at all, — and he is equally careless of criticism save that which can show that his premises are false and that his conclusions are irrational. But he is prepared to accept the last consequences of that kind of criticism. He shall surrender his theory upon the presentation of a single fact of social life — human or otherwise — which is seen irreconcil-

ably to be out of harmony with his highest generalization. But let us return to the matter in hand.

Social philosophers, as we have said, have been somewhat in the position of a man who is trying to discover the end or the motions of a stream by following the stream from its source, and failing to observe the conduct of other streams. Such an observer could follow the stream halfway, or even three-quarters of the way, upon its course. He would certainly conclude that there must be *some* end to all these various activities and manifold turnings. He would learn, after a time, that in following the stream he had been carried progressively in one direction; and that, through the numerous bends of the current, he could draw a straight line to its source. Yet had he never seen the sea, it is manifest that he could form no *true* conception of the stream's ultimate end and destination. His conception of the end of the motion would be that which he could make from the observation of the facts before him—that the end of action in the stream was the very process of flowing on.

If, now, the same observer were to find other streams, very like one another in all essential particulars, is it not clear that he would form the same conception of them all? A stream, for him, would mean ceaseless flow without any end other than its fluxion. But let us say that he has followed one stream—*only one*—to its mouth, and has seen it empty its waters into the sea; would he not at once feel sure that all other streams, essentially the same as the first, conducted themselves in the same manner, and flowed forward to the same or to a similar outlet?

All that is wanting to accomplish a generalization such as this for the flow of human society is the spectacle of another society—the same in its essential actions—in which the end of the flow is seen spread out before us. Such society, as the reader already knows, is found in a group of honey-bees, the social state of which has been produced by the same basic forces as those which have wrought out the civilization of mankind.

We can do no better, then, when studying human society, than to keep before us the social state of the hive-bee as an example of completed social growth; as an example of that social equilibrium which, other things being equal, *must* be the only equilibrium at which social motion, flowing in a right line, can come to an end. The bee is a simple animal compared with man. A bee-group is simple as compared with human groups which, like those of the bee, live in a fixed place. But if motives of nutrition and propagation have carried the bee to that dead level of social growth found in the hive, is it not clear that the selfsame motives must carry man to the selfsame level, modified, of course, by the factor of man's more complex body and more numerous desires?

We must once again direct attention to the social state of the hymenoptera. There is no development of any kind in societies of bees. The fertility of the queen bee determines the number to which the population can rise. The only menace to the life purpose lies in undue increase of population. Therefore, if there be any moral ideas in the ganglia of these insects, they are associated with matters of reproduction. The person of the queen—or the

essential *social* instrument of propagation — is the most “sacred” thing in the estimation of all of the integers of the group. When there is danger of overpopulation — and hence of social life — in multiplicity of queens, all but one are destroyed. But the idea of destroying a queen is the most repugnant idea possible to the bees who carry on the economic industry of the hive. These never touch the person of a queen save with manifestations of the highest respect and solicitude. Rival queens are permitted to kill one another, but no worker ever takes more than spectator’s interest in such combats. So deep seated is this conception in the nature of the insect, that two queens, when left alone to contest the supremacy of the hive, are often panic stricken when they face each other for the decisive battle, and fly from each other with every sign of alarm. They seem suddenly to realize that mutual destruction would defeat the very purpose of the mortal trial itself, and that the highest possible evil would result, namely, *the death of the community itself*, beside which the death of any individual — queen or drone or worker — would be insignificant by comparison.

The bee-group is ever confronted with danger of destruction by over population. With them, therefore, the idea of the highest right is associated with acts which preserve the equilibrium of the society with its environment, and so conserve the liberty of each and of all. To maintain that equilibrium perpetual vigilance is needed and is not found to be wanting. Of secondary importance is the proper feeding of the young. Bees attend to the wants of their young with a care and a tenderness of ministra-

tion not excelled by those of any human mother, and not approached by those of most parents among men. The proletary is reared with scientific and intelligent purpose; and moral perceptions of a high order attend the process. The method of distribution of the social economic product is such as to be mechanically self-adjusting. Any disturbance of the mechanism would result in confusion and destruction of the groupal life. And we can hardly be charged with hyperbole when we say that bees *never think* of making a change in that method. Hence we may say that the state of a bee-group is the *norm* of social motion, or the level at which all progress has come to an end.

It will be drawing no analogy to assert that such level is the end toward which human social forces flow. We do not mean to say that human society ever will or ever can carry on its propagation in the same way as do bees, or that human society will ever be confronted by a similar menace from increase in numbers. The only menace from increasing population which can disturb human society is that involved in the quantity of available food. At the present time an increase of population is desirable in the most advanced communities. By "advanced communities," we do not mean the older civilizations of Europe, but their colonies. If antiquity of civilization were implied by the term "advanced," then China and India would be the foremost communities of the world. By "advanced" we intend to indicate those human groups in which the method of dividing wealth has been changed so as to more nearly approach the method which is socially organic with

bees. We shall reserve the question of the propagative adjustment of society for discussion in another place. Here it is needful only to consider the motion of human society toward the level of wealth-division, which shall present a perfect equilibrium of moral ideas with the economic life of the group.

What, now, are the observed facts in human social motion? Is it flowing in the direction of a norm similar to that found in societies of bees? To answer the question rationally, we should ask if the motive forces are the same in the two orders of social phenomena. If there be any manifest difference in the nature of the norm, it should have to be accounted for by some perturbing force. And if this perturbing force be found, then the very perturbation itself is only an additional proof that the two orders of phenomena are included in the same law.

The motive forces in the societies of bees will be admitted to be those of nutrition and propagation. The play of these forces has brought bee-groups to the norm in which we find them. And everywhere, in social growth, we see that the same forces have carried groups of men in very much the same direction. A fatal objection would be found to this theory if, anywhere, there could be pointed out a society in which progress was attended by action in the opposite direction. The proposition contradicts itself, indeed, for in the very definition of social progress we have seen that its essence consists of larger liberties for larger numbers. To say that there has been social progress in any group wherein the liberties of the masses have been continually and increas-

ingly contracted, is absurd. And as such liberties can be expanded only by the expansion of the wealth of individuals, it follows that this process has gone forward in all communities where social progress is visible, and that it continues to go forward now. This truth needs no argument to support it. It is fundamental. In this much, then, the direction of social motion in human societies can be described by a right line drawn to an economic norm precisely similar to that of bees.

But this line will not describe the direction in which human social motion flows when it is the propagative norm that is considered. There is hence some force which perturbs the motion, and which, in its effect, should produce a norm in human society which should differ from that of bees *in precisely that character produced by this perturbing force itself*. That character can only be the reproductive character of the race. In their nutritive characters, man and bee are precisely the same. There is no essential difference in the method by which assimilation is secured in the human and the apis. The bee obtains its food from the environment, consumes it, and assimilates it. This is a fundamental law of vital growth, animal and vegetal. But the social factor enters into the question, and it is with that we are dealing here. Societies of bees and societies of men use identical methods in their *productive* economic life. It is only in their methods of the division of their wealth that they differ.

We have seen that the change in the method of distribution among men progresses in a right line toward the norm of distribution observed in groups

of bees. This is true because there is no difference in their methods of economic production and assimilation, socially considered. But the motion of human society toward the propagative norm is perturbed by the difference between men and bees in the method by which propagation is procured. So that while we may look for an economic norm in societies of men precisely similar to that of bees, we should look for a propagative norm somewhat different in detail of method, but very much the same in the complete result. In other words we must look for a propagative norm in societies of men which shall be secured by some method directly concerned with the *viviparous* character of man, as we find that it is secured by a method directly involved with the *oviparous* character of the bee. The very great fertility of the fully developed female apis rapidly leads to the establishment of the propagative norm, and makes easy the preservation of a normal population. The other extreme of fertility in the human female renders the process of equilibration less rapid. With men the great menace has always been an under-supply of food rather than over-population; whereas with bees the food-danger is always at the minimum while the population-danger is always at the maximum. As it is with the economic norm we are presently dealing, we will examine the direction of the motion in which economic forces flow in societies of men, reserving the discussion of the reproductive norm for its apposite place. We must note, however, that the difference between the twofold norm of the bee and the twofold norm of man, as difference there must be, of course, will be accounted for by the perturbing

force in human society found in the method by which the race is maintained.

It is scarcely needful to point out that an inquiry which deals with economic progress, in the direction we have discussed, will have to use as its principal instrument the category of things which have been called *wealth*. To underestimate the value of wealth is as dangerous to healthful and useful social theory, as to underestimate the ethical or intellectual aspect of man's nature. Indeed, the one underestimation involves the others. The seemingly moral superiority of some savage societies, say the Veddahs, is not real superiority at all. The delicately sensitive ethical consciousness of the Veddah or the Hawaiian is no indication that these societies are superior to European societies, any more than the perfectly balanced ethics of the bees can be said to be an indication of the superiority of bee-societies over those of men. The relations of the Veddah or the Hawaiian to the environment are profoundly simple as compared with similar relations in highly civilized communities. If ethical progress in civilized groups has been slower than in these savage peoples, it is because the quantity of wealth is immeasurably greater in the one than in the other. If we suppose that the ethical perceptions of Europe were perfect, we could hardly compare the quantity of ethical consciousness of the savage and civilized states. It requires little contact with civilization to break down the ethical concepts of a people like the Veddahs. But such peoples do not become "corrupt" because the civilized men with whom they are thrown are more immoral than they. They become immoral because the new wealth added

to their environments by civilization disturbs the ethical balance made possible by the former simple environmental state.

Civilization, itself, consists of nothing but the quantity and variety of the wealth of a community and the ideas — ethical, economic, æsthetic, and intellectual — which this wealth produces, enlarges, and preserves. Wealth must therefore be the chief instrument of investigation in any inquiry into the flow of social forces toward moral and economic equilibrium. To say that wealth is only a fit thing to despise will be suicidal from no matter what point of view we consider it. It cannot consistently be condemned by the intellectual man; for he should know that it is the quintessential of scientific progress. It cannot be disregarded by the æsthetic man; for he should know that all perceptions of harmony, whether of natural or of artificial beauty, are strengthened by its use. It cannot be minimized by the moral man, for he should know that the possession of wealth enables its owner to encompass that act approved by the highest ethics as being the most righteous act that any man can do, and that is to bestow wealth in charity. Even the Hindoo *Yogi*, who is as far from being utilitarian as one can well conceive, nevertheless in his precepts concerns himself largely with the question of wealth. If we remove the idea of wealth from the philosophy of any of the great reformers, it will be found that not much remains of their maxims save those which apply to life itself, and life itself is dependent upon the creation of wealth and its distribution among men. When, therefore, we discuss wealth as one

of the fundamental conceptions of social progress, we are consciously doing only that which is unconsciously done by those who affect to despise it.

The various motions by which human society is carried forward flow along lines converging to an equal division of the environment. Stating the proposition in more explicit terms, the whole quantity of wealth is distributed among individuals in parts more nearly equal as social progress goes on. Only a moment's reflection is needed to show the truth of this proposition. The current idea expressed in the proverb that the rich are growing richer while the poor are growing poorer, is only true in so far as men's ideas of wealth and its possession are concerned. Poverty, even in comparative degree, is now far more repugnant to the mind of men than was absolute poverty not so very long ago. A few centuries since, the possession of a pair of shoes was considered a mark of comparative wealth in Europe; while at the present time the want of a pair of shoes is deemed a mark of indigence. This is the fact because the absolute increase of wealth has been accompanied by an increasingly equable division. The method of distribution has rapidly changed. The increment of use-capacity in men has been enlarged by additions to the possessions of larger numbers of individuals. The enlarged capacity has so widely extended desires for larger possessions, that what seemed to be riches not very long ago seems to be poverty now. It is by the enlarged capacities of men that riches and poverty are now gauged; and thus it would seem to highly sensitive ethical perceptions, created by this very

change of method, that the poor are growing poorer ; whereas the truth is that, measured by the ethical perceptions of former times, they are extraordinarily rich.

These effects have been wrought out by the use to which wealth has been put. When the environment shifted from the moving to the fixed locality, all wealth and all ideas of wealth became, as we have seen, multiplied extensively and intensively. All forms of wealth expanded in quantity and in complexity. It was only with the rise of true agriculture that true capital and ideas of true capital became possible. By the term "capital" we understand, of course, that part of wealth used for the creation of new wealth. Men discovered a new use for plants and seeds, and for animals. By refraining from the consumption of these as food and clothing, it was found that larger quantities of food and clothing could be secured with far less effort than before. This method of production soon became organic in society, and the category of true capital arose. But once that this idea became permanently fixed, it was clear that this particular form of wealth would be the one most desired.

Wealth which multiplied itself was more desirable than merely consumable wealth, for the reason that its possession enabled its owner to increase the quantity of his possessions of every kind. Capital could not only be used for the creation of new wealth, but likewise for the creation of new capital. In primitive societies capital was largely, if not altogether, of an agricultural kind. As the category became enlarged, human beings were added to it ; and with the rise

of manufacturing industries, the nature of capital would become more and more complex, while its quantity would be correspondingly increased.

One of the most important discoveries of society, and one which was made very early, was that certain parts of capital could be put to a use which, while not itself creative of wealth, vastly facilitated the methods by which that creation was brought about. This was the discovery of money. It was, like every other discovery, merely the perception of a new relation of the environment of man. It was an individual perception at first. But it at once became social because its value to the individual was nothing so long as he kept it to himself. Things which could be used in this way would now become the most desirable parts of the environment, because those possessing them could acquire at will wealth for use as capital or wealth for use in consumption. But as capital always was, and is now, the most desirable form of wealth, it will be seen that the most desirable purpose of money was its use as capital. And this desirability has been so intimately associated with the things used as money, that the term "capital" is now commonly used as meaning money, and not as meaning true capital as that term is used by economists.

With the rise of metallic money, following the rise of the metallic arts, came rapidly increasing cumulation of wealth and no less rapidly increasing increments of economic, moral, and psychic capacity. The effect of money upon society was highly expansive. Individuals found that the life purpose was vastly helped or hindered by the possession of money or

the want of it. Metallic money, giving to man a safe and imperishable instrument with which to convert one kind of wealth into another, at the same time became an instrument of moral progress and gave a tremendous impetus to intellect and to art. The discovery of money had another effect upon social progress directly concerned with the purpose of the inquiry we are now pursuing. Capital was the most desirable part of wealth, and money the most desirable part of capital; but money was also the one instrument by which the growing increment of ethics was satisfied. For it served readily to bring about those changes in the method of distribution whereby larger shares of capital fell to larger numbers of individuals. Money became the all-essential element of power of whatever kind. Power of any kind, in fact, could not exist without it. Its possession was as necessary to the king as to his meanest subject. It could buy armies or encompass the death of the strong man quickly and safely. But these were mere subsidiary and confluent forces of its function. Its true function was the limitation it placed upon the power of a few men to acquire larger shares of wealth than the moral standards approved.

This money-limitation of the psychic capacity lay in the fact that the quantity of good money was itself limited in any community. The latent power of money enabled its possessor to defer the gratification of his desires to such time as he had accumulated sufficient of it to act upon the environment in the capacity of a capitalist. In this way the number of capitalists would tend constantly to enlarge. It is not difficult to perceive the truth of this assertion.

The laborer, earning a little more than was needed for sustenance, could set aside a portion of his wages for future use as capital. Now if he were paid only in *real wages*, — that is, in food, clothing, and lodging, and the other things commonly used by him, — it is manifest that he could not quite easily lay up portions of these for future use. But if he were paid in money, and especially in imperishable money, this process of saving would not only be easy but would be produced and developed by the very character of the wages themselves. There would thus operate a force by which larger numbers of individuals would be enabled to accumulate from the current fund quantities of money which, when they became sufficiently large, would be transformed from consumption-money into capital-money. But at the very moment when the accumulator of consumption-money would transform his fund into capital, that fund would flow back again into the hands of laborers and would begin over again the process of accumulation for use as capital in the future. Thus we see that the very satisfaction of the desire to secure greater shares of wealth acts, of its own force, in a manner to enable increasingly large numbers to secure increasingly large shares for themselves. And by this process the method of distribution would be so altered as to carry society forward toward the norm in which the total product would be *equally divided between all the producers*.

That this would be the natural result of the action of human desires, when coupled with an instrument for their gratification like that found in money, there cannot be the slightest doubt. As the more wealthy capitalists would use money almost solely for the

creation of new capital, money would flow to producers in ever increasing quantities and the number of capitalists would thereby enlarge. That part of the distribution, carried on by the process which has been called *interest*, would really arise out of the productive activities of the group, because the money-owner, who did not himself become a real capitalist, would indirectly use his wealth for productive purposes by lending it to others who would directly so use it. For inasmuch as money is powerless except when it is used, the money-owner would be impelled to use it by parting with it, and in doing that he would only assist in the process whereby new wealth would be more equally divided among increasingly large numbers of individuals.

In a rapidly developing society there would arise a tertiary form of capital which would be a quaternary form of wealth. We should look for this tertiary form only in societies in which the economic environment is highly complex, and we should expect to find it in larger quantities and more general use as the complexity of the environment rose to higher and higher degrees. It is natural, too, to expect that the value of this new form of capital would pertain more and more to the psychic capacity as kinds of wealth would increase. The discoveries of true capital, of metallic money, and of money's great potentiality as capital, were the steps leading up to this fresh discovery of a new relation to the environment. This tertiary form of capital is found in those instruments of debit and credit used for the facilitation of industrial progress, and it includes all that class of things described generally by the terms "notes," "bills of

exchange," "stocks," "bonds," "checks," "securities," "drafts," and other instruments which take the place of actual money in the processes of production and exchange. It will be seen that the function of these things is highly psychic. They bear the same relation to money that money bears to productive capital. They give to the capitalist and to the saver the power of quickly transforming one form of wealth into other forms. So much so, indeed, that by their use potential wealth can be transformed into actual wealth even before the process of actual production begins.

But the true purpose served by them is the more equable distribution of wealth which money, in its function as capital, began. Capitalism could grow much more rapidly after the discovery of money than before that discovery. And this is true because it furnished an instrument which, unlike the actual instruments of production, was not quickly perishable, and which could, at any time, be converted into those actual instruments. As the latent energy, or potentiality, of money depends upon the psychic capacity of men, so does the power of the tertiary form, only in higher degree. Money is the concrete symbol of the property right; and so are all those instruments of tertiary capital we have indicated. But these instruments are symbols of a property right more complex in its nature than that found in simpler societies.

An illustration will enable us to perceive how the tertiary form of capital has given freer play to the forces by which the norm of equal division of wealth is approached. In a comparatively simple society the capitalist must be directly associated with the things he uses for the creation of new wealth. So long as

the simple state prevails there must be a comparatively uneven division of wealth. The individual may possess potential capital, in the form of money, in excess of the working capital he uses. But money cannot be retained by the individual and at the same time *used* by him in production. To enjoy the power it confers upon him he must part with it. It is useful as a symbol of property only when wealth is multiplied by the surrender of the money to others. It is clear that if money could be retained by its owner, and at the same time could be used as an instrument of production, it would possess a double desirability. A form of capital, therefore, which would unite these two characters, would be far more desirable than money. Now this very form of capital is found in such an instrument as a share of stock. Shares of stock, or other similar instruments of capitalization, are infinitely more desirable than money for the satisfaction of men's desires to possess as much wealth as they can possibly acquire. If all property rights were symbolized by shares of stock, we can imagine an industrial Alexander who could not be satisfied until he possessed every share of stock in existence, and thence possessed a property right to all the appropriable wealth in the world. The excellence of the tertiary form of capital as an instrument for the satisfaction of the ever increasing desire to *own*, would therefore force its own development in every rapidly advancing civilization. For the possessor of the stock-share would find that he could not only retain it in immediate contact with himself, but that he could also use the power it conferred upon him in the creation of the new wealth he desired. Through its use

he would find that it served to enlarge his possessions, not indeed by parting with it, as in the case of money, *but by retaining it and adding to its quantity.*

But while it is true that tertiary capital would thus serve the purpose of the desires of men to increase their wealth, it would, like money, serve to limit the action by which those desires were gratified. For if money enabled larger numbers of men to become capitalists, shares of stock have enabled increasingly larger numbers to become partners in capital without the necessity of coming into contact with the things actually used in production.

It will hardly be contended that the number of persons who, in their capacity as shareholders, are really capitalists, is smaller at the present time than was the number of capitalists before the rise of the joint stock company. If the stock company system had not served as a better instrument of enlarging the wealth of the rich capitalists, it would never have been introduced. And when these capitalists once discovered that by enlarging the number of their partners they increased their own possessions, it is probable that they would continue to trade shares of stock for money to be used for the further enlargement of their wealth-creating means.

We have used the illustration of the joint stock company, because it is probably the best illustration of the method by which society flows toward its norm of equal division of wealth. Illustrations of this action will be found as readily in all the other instruments used in the mechanism of exchange, and it is not needful that we should go into elaborate detail. This could be done only by an expansion of the

argument into a volume out of all proportion to the necessary discussion of principles.

It should be remembered that society, in its kinetic aspect, presents a multiplicity of phenomena, which, viewed from any standpoint other than the one we are using here, must be inextricably obscure. So long as we regard social facts as isolated ideas, we can never hope to understand the harmony underlying the motions of society. If there be no harmony in social action, then it is useless to investigate its phenomena. If harmony exists, the purpose of investigation is to discover wherein it consists. And this can only be done by drawing social phenomena, one after another, into a law of harmony which shall disclose the relations of social facts to one another.

The apparent want of harmony in the motions of society is due only to the apparent lack of purpose toward which the motions converge. While the direction seems here and there to shift out of the line which will carry society to the norm we have described, it is only because progress is hindered at times, as at times it is helped by the character of the environment. When societies discover new relations to the environment easing the flow to the norm, the action in that direction is rapid. In societies in which the number of such discoveries is small, the progress will be slow; and in those which do not discover any new relations at all, there will be no progress whatever.

The investigation is very greatly assisted by the fact that it has for material many societies in different degrees of development. Some of them are very far from the equilibrium which we have assumed to

be the end of social motion. Some of them are approaching it very slowly and painfully. Some are approaching it very rapidly. And at least one of the social races—the bees—has developed in one of its genera a social state in which the equilibrium is found to be fully established, and in which social progress has come to an end. If this last-mentioned species of social organism were composed of *men*, an examination of its historical development would teach us all that could be known of the law of social growth. But this is not the fact. In so far as it is like men in its functions, we can use it in the inquiry, and only in so far. The purpose of the investigation will be better served by considering all groups together when we are dealing with forces which have developed them all up to the point attained by the lowest in the scale. We can then proceed by applying the law to all that have reached stages beyond this lowest stage, and so on until we have left only the few societies which have reached the highest development in the social scale. That highest development will be found in those societies which have approached nearest to the norm, or, in other words, those in which the division of wealth is more nearly equal.

It is implied in the above premises that the environments of some societies are better suited to the rapid flow of social motion than those of others; and as these present the most favorable material for investigation, we can deal with them exclusively in so far as the method of distribution has been carried forward in them all to a certain point. But as some of them are in advance of others, it may be necessary to consider that particular one which is the most

advanced of all. It may appear that when we deal with only this one society we are neglecting to weigh the social facts presented by the others. But this will not be the truth, because the particular society used for illustration is a product of precisely the same basic forces as the others, but is only more highly developed.

Thus if we study England as an example of constitutional groups, it will be found that it presents the same facts as all other constitutional countries of Europe up to a certain point, beyond which England has progressed, and below which other groups have remained. If we use the United States of America as an example of republican groups, we shall see that the difference between it and England consists only in the enlargement of the constitutional principle which has carried it beyond the state to which England has been able to rise. All reforms of government in England have been toward the form of government used by the United States. Thus, a constitutional history of the United States would involve a constitutional history of Europe, and of England especially. We have made this digression in order to establish the conception that the general harmony of social facts can be understood when we understand the harmony of the facts presented by the most highly developed societies.

The law by which can be explained all the facts of a developing group must be a law in which is stated the order of action by which a society is carried toward or from a state of economic equality for all — toward or from an economic life very like that of honey-bees. When we regard apparently contra-

dictory social facts in this light, we shall see that there is real harmony behind them. We touched upon this matter when we discussed the nature of crime. We saw that the paradox of an increase in crime accompanied by social progress was explained by a change in the moral ideas of men, or a shifting of moral standards to higher and higher levels. If this shifting of standards were caused by the increased capacities of more men for larger shares of wealth; if, secondly, the increase of capacity were caused by a progressively more equable division of wealth; and if, lastly, this increasingly even division were caused by the discovery of new relations to the environment—let us say the discovery of money—then we could discern a harmony between the conflicting terms of the paradox which was not perceived before.

Every paradoxical character of crime would disappear were we to conceive of the phenomenon of crime as a deviation from the right line of progress which terminates in a perfectly equal division of wealth; a deviation, however, which is necessary in the very nature of the forces moving society onward toward its purpose; and, lastly, a deviation which is occasioned, and at the same time modified, and controlled, by the shifting moral standards, the increased capacities, the convolving environment, and the discovery of new environmental relations.

We have already said that all social facts may be reduced to the four laws of social life set out at the beginning of this chapter. These laws are the generalizations of social action in its four aspects. But these are only aspects of one and the same process

which can, of course, be none other than the action of society in moving toward its norm, in which shall be found united the historical sum of all of its motions. And if this kinetic process is only the *equalization* of wealth, then it should follow that in that process of equalization should be found the causes which explain all human facts. Carrying our argument a step farther: If this last generalization be true, then it will follow that human society, so far as human observation is competent to affirm, *can have no other purpose than this very equalization toward which all social motions flow.*

So long, therefore, as a society is in process of flowing toward its norm, we should not expect to find that equilibrium which the norm alone supplies. We should expect to find the society in an increasingly unstable state as we recede from the norm, and in an increasingly stable state as we approach it. In those human societies which have discovered the most numerous relations to the environment, we should find the action in the direction of the norm most rapid. And this rapidity of action should be accompanied by healthy freedom in the increase of population. These societies, owing to the complexity of their environments, should have larger areas of moral sensibility, and a more equable division of wealth than other human societies. They should have more numerous and more efficient instruments of division of wealth than societies more distant from the norm. Their state, while apparently less stable than other societies, should be found to be really more stable, inasmuch as that no pressure from over-population, or menace from stronger contiguous societies, threatens

their integrity. They should tend to draw from weaker and less rapidly advancing communities streams of individuals whose desires lead them to environments which better serve the life purpose. They should present social characters which diverge from those of other societies in the direction in which the environment has been most profoundly altered.

In such societies we should expect to find that the progression in equalization of wealth has most widely enlarged moral perceptions in the matter of property right. This enlarged morality would produce conditions of crime very divergent from those of other societies not so far advanced toward the norm. We should expect to find very much larger increments of capacity in larger numbers of individuals in such societies than in others, and hence a more painful mental social state. New increments of capacity would tend, in such societies, to produce conduct spontaneously condemned by the ethics of other societies. The efforts of almost all individuals would be directed toward securing larger shares of wealth. In such societies many facts should coexist, the coexistence of which would seem to be self-contradictory. Thus we should find coexisting moral conceptions which should apparently destroy one another. We should find men condemning, as highly wrong, acts by which the wealth of individuals is enormously increased, and at the same time striving to enlarge their own possessions to the highest possible limit. We should expect to find the desire for wealth stronger than in other societies, and the conduct, by which the desires are satisfied, more strikingly disregardful of the rights of others. We should ex-

pect to find the anomaly of an unusually keen and general perception of the rights of self, coupled with a general practice of commercial dishonesty in comparatively high degree.

We should find, also, that the quantity of crime against property should be larger in these societies than in others, and that conduct approaching, in principle, very closely to theft, should be a common practice. Such conduct would be more readily facilitated by the complexity of the environment; for the higher forms of capital, in such societies, would enable managing capitalists to distrain from their numerous partners illegal shares of wealth. In less complex partnerships such conduct would not be possible. We should likewise expect to find, in these advanced societies, that while such apparently lax moral conceptions are present, the wealth of the average individual is greater than it is in communities in which such ideas are comparatively backward.

We should find, too, that ideas of inequality, acceptable enough in other communities, are, in these, highly repugnant to common standards of right. In them there can be no fixed ideas of the propriety of large quantities of wealth remaining in the possession of any particular class. There should be no class which, *as* a class, is always associated with ideas of great wealth. There should be no *wealthy class* other than that produced by the continuous efforts of individuals to secure larger shares of wealth. In other words, there would be no *organic inequality* produced by the successful or unsuccessful efforts of individuals to enrich themselves, because the growing moral increment would condemn

a process which would permanently prevent the satisfaction of the growing desires for life.

All these phenomena will be seen to be perfectly harmonious when the causes of them are understood. If such a state exists — and it will be admitted that it exists in the United States of America especially — there must be a cause for it. If we can find the cause, we can understand the phenomena. And the only cause to which can be referred the apparently contradictory facts we have noted, will be found to lie in the rapidly advancing equalization of wealth. It will not assist us to assign specious or vaguely general reasons to the facts before us. To say that the popular “moral tone” is lower in America than elsewhere will not answer the purpose, for even were this the truth, it would only be a restatement of the matter. But it is not the truth. The moral consciousness of America is very much larger in quantity and more delicately sensitive than that of any country in Europe, as we shall presently see. If we are to learn the causes of the moral difference between America and Europe, we must find the forces which produce one state of morals in the one place and another in the other. We do not hesitate to say that of the countries of Europe those which more nearly approach America in general economic equality more nearly approach it in their moral conceptions; and the comparison may be carried farther by the additional assertion that the substantial methods of government will be found to be correspondingly like.

Let us inquire whether the moral consciousness of Americans be greater or less than that of Europeans.

In England we find a system of nobility which is

given, by law, an inalienable right to a coördinate function of the government. Mere accident of birth confers upon an individual the right to rule his fellow-citizens. Fitness to rule fairly—that is to say, for the general good—is not even theoretically admitted to be a necessary qualification. Accident of birth is the essential qualification.

Associated with this system of inherited right to rule we find a system of land tenure which has enabled a comparatively small number of individuals to continue to own most of the surface of the earth constituting the realm. We find that while men are free to practise any religion approved by their choice, they are required to surrender a part of their wealth to administer to the religious comfort of others who approve of creeds different from, and even antagonistic to, their own. This taxation for religious purposes is not justified by any appeal to good citizenship; for it is admitted that a citizen who does not subscribe to the state religion may be as useful as one who does. The taxation of all classes for the benefit of one class, in the matter of religious practice, has not even a plausible justification. It has no justification other than that offered by the thief who deliberately appropriates the wealth of another for the gratification of his personal desires.

In England all classes are taxed for the support of a large number of individuals who contribute nothing whatever to the common good. Large revenues are diverted from the public treasury to private persons, for their private uses, merely because these individuals are born of the royal stock. They render no service whatever to the community, either actual or potential, in return for the shares of wealth they receive by

enactment of law. Now all these things hinder the freedom of the pursuit of happiness by the masses, and the social mechanisms of the legislature and the judiciary are used for this end. Another limitation is placed upon the liberty of the masses by the restriction of the suffrage qualification.

If, now, we consider these limitations together, we shall find that they are all of a moral nature. If it is true that the citizen of England believes that his liberty is conserved by taxing himself for the support of a nobility and a royalty, for the administration of religious comforts to others of creeds antagonistic to his own, and for the maintenance of a system of law by which that system of taxation is sustained, then it is clear that he believes that these things are *right*. In other words, the moral conceptions of the majority of the English people do not condemn as wrong the organic inequality of birth and wealth found in the English polity.

But we know that these institutions have been largely modified within a century of English history, and have been very largely and very radically modified within five centuries. This change can be traced to no cause other than corresponding changes in English conceptions of right and wrong, or a shifting of moral standards to higher levels. The changes unquestionably have taken place. They have been due unquestionably to a growing moral consciousness. All of them have been in the direction of the curtailment of the power of royalty and nobility. All of them have been followed by larger liberties for the masses. It would therefore appear that larger liberties await on further changes in the same direction, unless we contend that England has made no social progress.

But in America we find that these institutions have been abolished altogether. And unless we hold that English standards of morals are no higher now than they were in the time of Henry VIII., we must admit that American standards are higher than those of the England of to-day. This opinion will be reinforced when we consider that in America the division of wealth is far more nearly equal than it is in England. If England of to-day is in advance of England of the time of Henry, and only because its wealth is more evenly divided, then it must be true that social progress in America has been carried farther than in England.

Thus we observe that although commercial dishonesty seems to be more prevalent in the United States than in Great Britain, it is because conduct is measured by different moral standards. The Englishman who sets down the American "conscience" as having a "low moral tone" because of certain lax ideas in trade or in politics, approves a system of taxation which, to the American, is more repugnant than highway robbery. The familiar illustrations of the beam and the mote, the gnat and the camel, suggest themselves here with no inconsiderable force. The robber lord of the mediæval feud is no more repugnant to the modern British citizen than is the modern British hereditary lord, with his right of rule, to the American citizen of to-day.

In these facts, we apprehend, can be found an explanation of the paradox of laxity in political and commercial ethics coupled, in America, with wider freedom for the pursuit of basic pleasures. What seems to be a forcible objection to the theory

offers itself almost immediately. The objection may be stated in this way: In England the total wealth of the community is attached to a very few individuals as compared with the wealth of America. But the punishment for crime against property is much more severe in England than in America.

If, as we have argued, the moral standard of Americans be really higher than that of Britons, regard for property rights should be more rigidly enforced in America than in Britain. But we find that such is not the fact. Crimes against property, which would be severely punished in England, are readily condoned in America, and it would appear from this fact that the property right is held to be more sacred in the one group than in the other. This would seem to be a palpable contradiction of the principle we have announced that sanctity of property is measured by the degree of ethical evolution. We shall find, however, that the contradiction is only apparent, and that property is far more sacredly regarded in the republic than in the kingdom. And we shall find, moreover, that, paradoxically too, the apparent laxity is really due to this very distinct advance in ethical concept.

In England, as elsewhere, a crime against property is heinous as it approaches the sovereignty. Theft from the government is never condoned either in Great Britain or in the United States. But theft from an individual is punished in England with a severity seldom observed in America. This may be more clearly understood when we remember that the pursuit of wealth, in its widest possible freedom, is an idea highly acceptable to American ideas of *right*. Liberty to increase

his possessions is the paramount liberty in the estimation of the citizen. He would, therefore, be disposed to restrict, as little as possible, like liberty in others. This idea would take its most extreme form in the unqualified approval of a man appropriating the possessions of another in order to sustain his life. That man who would show in an American court of justice that he had stolen in order to obtain food for his family, would never be found guilty by a jury of American citizens. On the contrary, his predaceous act would not only be condoned, but he would be promptly relieved of his distress by a sympathetic public. All idea of the sanctity of property is subordinate in America to the idea of the sanctity of life. In the moral standards of Americans the value of the life of the citizen is higher than it is in any community in which there is a less equal division of wealth than in America.

As we rise from the extreme of the conception in which outright theft is not only condoned but approved, we should find that acts approaching theft are justified by the common moral standard in the degree in which they are prompted by the primary necessity by which actual theft is itself justified. In a community which regards liberty for the pursuit of wealth as the highest good, we should look for ideas which approve successful pursuit, even though success be encompassed by methods which are not always ideally just. The citizen does not place a limit upon the success of others so long as safe avenues to similar success are left open for himself. As he spontaneously approves an act by which a fellow-citizen saves his family from starvation, even

though that act is outright theft, so does he tend to approve an act which enlarges the possessions of a fellow-citizen, so long as that act does not limit the liberties of all in achieving a like result.

This basic desire for liberty of pursuit would tend to produce a common sense of right whereby the acquisition of wealth would not be condemned so long as it did not press too closely upon the life purpose of the majority. This would result in the apparently lax ideas of property found in America. But that laxity, it is manifest, is due only to the egoistic ideas of the individual concerning his *own* right to acquire as much wealth as it is possible for him to acquire without meriting public opprobrium. The American is quick to apply the *argumentum ad hominem* in the matter of gain; and this is the fact because the average American is far wealthier than the average citizen of other countries, and hence has a larger capacity for the enjoyment which wealth makes possible.

But as soon as the process of acquisition begins to act in a manner which curtails the potential wealth of the many, while it adds constantly to the actual wealth of the few, the moral concepts of the many begin to change. As long as a comparatively few individuals can accumulate vast fortunes without interfering with the liberty of others doing the same thing, vast accumulations of private wealth are approved. But when such accumulations are associated with ideas of a restriction of like liberty for others, they are condemned.

Here we are met with another difference between the moral standards of Americans and Europeans.

In America, it matters not *how* the vast fortunes of individuals have been accumulated; whether it has been by legal or illegal means; whether it has been passively by the increase of population, or actively, by the foresight and superior abilities of the capitalists; whether, in accumulating them, the capitalist has aided industry by the increase of his trade, or has injured industry by the reduction of wages, or by a limitation of his product with a corresponding rise of prices. These factors have little bearing on the moral judgment of the people. Whenever accumulation of wealth in private hands is conceived to restrict the liberties of others in acquiring wealth of a like kind, the accumulation is condemned as wrong. Popular opinion is expressed in the form of statutes, which declare to be illegal and criminal the methods of trade which had been once perfectly legal and which had been once considered perfectly just.

Thus we behold another paradox in American morals. By the current code apparently vicious methods of acquiring wealth are condoned and approved; whereas apparently just methods are condemned and sought to be punished. But this paradox will be understood, too, when we remember that the former methods are not conceived to limit the common liberty, while the latter methods are conceived to do that very thing. And these apparently contradictory conceptions are explained by the fact that the division of wealth, in America, has been carried progressively along lines which converge toward a perfectly even division of the total wealth among all the individuals of the group.

To the average European these various moral con-

cepts of Americans naturally seem to be the quintessence of discord. To him it appears inconceivable that a people should approve of methods which, in his view, closely border upon fraud, and yet condemn as iniquitous methods which appear, in his view, to be perfectly just. But when he remembers the difference in the size of the capacity of the mass of the American people and that of his own for the enjoyment of wealth, these conflicting moral opinions will not be without their causes.

He may have his own opinion as to the comparative desirability of the two moral standards. He may think it is perfectly right that an hereditary lord should have the power of governing because of the accident of birth. He may think it is just that the vast mass of the population should be tenants while a few own the land. He may be convinced that his liberties are conserved by taxing all the people for the religious comfort of a class. He may conceive that it is useful and beneficial to the nation to distrain public funds for the support of an idle royalty. He may think that it is just that a few individuals should have the right to the monopolist control of an entire branch of industry so long as that control is secured by the merging of many interests into one. He may believe that the right of self-preservation should be limited by property right, in at least *some* degree. And he may thoroughly condemn a national standard of morals to which all these views are highly repugnant. But he will be compelled to admit that a very prosperous, very powerful, very populous, very intelligent, and highly sympathetic and generous people are disposed radically to disagree with him in

these somewhat essential conceptions of right and wrong.

He will not deny that American workmen are paid larger wages than British workmen; that the internal wealth of the United States is more evenly divided than that of the United Kingdom; that there is no emigration from America and a large emigration from England; that the United States is more democratic than democratic England itself, from which it sprang; that American economy is rapidly replacing British industry in the world's trade; and that America, in spite of its heterogeneous immigration, rapidly absorbs the foreign elements which pour into it in a steady stream, and rapidly transforms them into the substance of its institutions, ethical, political, and economic. He will not deny efficiency to American methods of education and taxation. If he finds that legislatures are corrupt, he will not find hereditary legislators who have everything to give to and nothing to ask from the people. And if the "moral tone" of the American people seems to him to be low, he must remember that this "moral tone" has been produced by the very benefits of a system which is the most desired object of all moralists who are not naturally pervert or scientifically antiquated.

If we again apply the historical method to the question, we will find that the only rational judgment to be rendered will pronounce American ethics to be higher than European. For it must be admitted that British moral ideas concerning property are more beneficent to-day than they were five centuries ago. The British laborer of the present time has property rights which were foreign to his ancestors. The

present monarch of England has not the power of a Henry to debase the currency or to confiscate the property of a class of citizens for his private uses. Such funds as are distrained for his use are freely voted to him, not, be it observed, by the *hereditary* rulers, but by the *elected* rulers. The public moral standard of England does not deem it right that the treasury of the realm shall be in the hands of the lords, but does deem it right that the economic function of the government shall be in the hands of the people. The income of the monarch and family has been progressively shortened by the representatives of the electors.

The highest court of justice in England has decided that laborers shall have the right to unite for the purpose of compelling their employers to pay higher wages. The theory of the power of the commons has passed into practice, and the practice of the power of the monarch (and his dependent nobility) has passed into theory, or very considerably so. These changes have been accompanied by a progressively more even division of wealth and have been caused by that progression. Increasing use of wealth has given larger capacities to increasing numbers of individuals. Ethical ideas have undergone a corresponding increase. What was right for the smaller capacity of yesterday is wrong for the larger capacity of to-day. If it is right to force the monarch to yield larger shares of his wealth to the people by withdrawing from him the power of fixing his own income, it has been found no less right for the laborer to force his employer, by refusal of his services in united action taken for that special purpose, to yield larger shares of production to the producer.

If England is more moral to-day than it was three hundred years ago, it is only because the English people, in the mass, are wealthier now than then. If confiscation from the people by the crown (through grants and patents) was right then, confiscation from the crown by the people (through limitation of the royal income) is right now. It is not the ideas of the king and the nobility which determine what is moral with regard to property. The determinator is found in the ideas of the people. The lord who would advocate the use of the army to restore the power he possessed eight hundred years ago would be condemned as vicious by public opinion. He might very well possess the capacity for wealth-owning possessed by his ancestor; but the action of that capacity is limited by the moral ideas of the majority. He may deem the majority dishonest, and be profoundly convinced that his opinion is founded on pure justice; but the conceptions of the majority are profoundly influenced in an opposite direction by the wealth in its hands, and by the desires which the possession of that wealth engenders.

We observe that in England the larger economic liberty of the masses has progressively changed ideas concerning the sanctity of property. We observe that crimes against property are not punished now as rigorously or as severely as they were a few generations ago, when the masses were less wealthy. We note that moral notions affecting property are very lax in the England of to-day as compared with the England of three centuries, two centuries, or one century since. We see that the increase in the complexity of capital and the growth of its tertiary form has made com-

mercial fraud more easy. We see that the acquisition of wealth, by methods not altogether ideally just, is approved in England, as in America, although not so spontaneously or so generally, and we see the same repugnance to monopoly as that in America, although in less degree.

It would therefore appear that the moral paradoxes of America are found in England, too, only in smaller quantity. Or, to place the proposition in its historical sequence, the same moral paradoxes found in England are found in America, only there they are found in larger quantity. And if England is more moral now, because of these facts, than it formerly was, America is more moral than is England of the present time because of the presence of facts of a like kind in higher degree.

We are thus brought to the conclusion that social facts, which seem to be out of harmony with conceptions of social progress, fall into harmony with these conceptions when their general relations are understood, and when these relations are reduced to a common fundamental cause. If that cause be not found in the rearrangement of the environment around increasingly large numbers of individuals; in the moral conceptions arising from that rearrangement; and in the flow of social motion toward the levelling of individual wealth to equal quantities for each, then we should be forced to abandon the theory we have here outlined.

The conclusions at which we have arrived, concerning moral ideas regarding property, imply similar conclusions concerning moral ideas regarding life. We should expect to find comparative laxity in the

value attached to life, and to sanctity of person, in communities more highly developed ethically than other communities. The average citizen, possessing comparatively large quantities of wealth and corresponding power, would be disposed forcibly to resent acts which, to his view, would seem to trench upon his privileges. This idea would take its extreme form in lawless acts against the life of others, and against the persons of others. We should expect to find a turbulence of conduct in this respect apparently out of all proportion to the highly moral sense of the community. But this very turbulence would be really only an evidence of the presence of a more healthy and independent spirit among the prosperous masses. The Russian peasant, who thinks himself honored by a blow from the hand of a great lord or military officer, furnishes an example of the opposite extreme of morality.

The moral codes of mining camps are proverbially lax in their conceptions of the sanctity of life. There is a proverb in the far West of America to the effect that consideration for the feelings of others is most delicate in those parts where revolvers are worn in plain view. But in mining camps the potential economic equality of men is greater than in any other circumstances of industry. In such localities men, through force of self-interest, are compelled to have the highest regard for the rights of others. Previously formed normal conceptions give way, in such circumstances, to ideas of justice which would be anomalous in communities in which the opportunities for wealth-getting are not so general. Thus this very lawlessness, which seems to distinguish the conduct of men

in such localities, is really due to a conception of justice which repels the thought of any interference with the perfect freedom of the individual to pursue the acquisition of wealth in his own way, so long as his conduct does not limit like freedom of others. All the men in a mining camp have nearly equal psychic capacity for the possession of at least a certain sum of wealth; otherwise they would remain away. And by this segregation of capacities, the ideas of miners are easily fusible into a common sense of right, which, when violated, expresses itself in acts of force against life and person.

If we pass from the extreme examples of the Russian peasant and the American or Australian or African mining camp to societies nearer to the centres of utilization, we shall find this apparent disregard for life adjusting itself to the freedom of the community in the pursuit of possessions. So it is that we find personal encounters more frequent in England than in Russia, and more frequent in the United States than in England. Whereas the practice of "lynching" in America, so far from being an evidence of a less regard for the sanctity of life than is found in England, is really an evidence of a greater regard for life. But it will be observed, in this connection, that the crimes for which men are most frequently killed by mobs are of a nature that is really more repugnant to the prosperous citizen than any act against the sanctity of person encompassed for the purpose of gain. And it will be observed, furthermore, that such crimes are committed, not by the prosperous citizen of European origin, but by the African in whom centuries of contact with the

Caucasian races of America has not been followed by moral progress either actual or potential.

To understand the force of the argument we have tried to make, the definition of social progress must be kept continually in view. That definition discloses progress to lie in ever increasing freedom for the many to acquire larger shares of wealth, and in the actual acquisition of wealth in this way. New wealth adds to the capacity of the individual for the enjoyment of still larger shares of wealth. Increased capacity progressively changes the moral concepts of the individual, so as to cause the number of acts he conceives to interfere with his liberty continually to increase in number. Old ideas of right and wrong are modified by the fluxion, alter their characters, and disappear altogether in the developing moral codes which arise with the developing environment and its progressive rearrangement. The change may be rapid or slow as the number of new environmental relations perceived are many or few. But wherever there is found an arrangement of wealth most nearly approaching equality for all, there, too, will be found the widest liberty for acquisition, and the most delicately poised conceptions of right and wrong, out of which will emerge, as we have seen, conduct which is morally paradoxical.

CHAPTER VIII

SOCIAL KINETICS CONTINUED

WE may now resume our inquiry into the methods by which the economic progress of society is carried forward. In primitive societies certain parts of the environment would have to be set aside for the free action of the economic mechanism. In very low orders of societies those parts of the surroundings, which have been called "public wealth" by economists, would be limited, more or less, to property useful to the military functions of the group. But with the discovery of metallic money, and its development into comparatively complex capital, the quantity of the public wealth would necessarily be enlarged, and its category extended to things which had been previously in the category of private wealth.

For example, metallic money would enable government to interfere with industry in many ways not before subject to that interference. While men used animals for money, government could not exercise financial control except in a cumbersome way. But it is manifest that governmental power would be extended vastly by the use of an exchange medium so compact, portable, and readily convertible as the precious metals. Government would, therefore, be disposed to assume control of money in some of its

functions if not in all. Thus we would find that greater or less parts of this most highly desirable form of capital would pass from the category of private wealth into that of public wealth. Inasmuch as any particular portion of the entire quantity of money might, at any time, come into the possession of government, it would be to the interest of government to enforce as a standard-money that which was found to be most acceptable to the people. By use of such money government would extend public wealth to instruments for the enforcement of laws found needful for the internal integrity of the group, economic and political.

This public control of the most essentially desirable form of capital would be found to facilitate the means whereby the saver of money would be protected by the interests of all—rulers and subjects alike. But it is evident that in communities in which the quantity of money would be small, only a comparatively small number of individuals could acquire sufficient wealth to live in circumstances of luxury. Prosperous groups would therefore tend to satisfy the growing capacity of the many by an increase of public wealth, of an æsthetic or luxurious kind, which would be common property for the use of all. Rich capitalists would gratify their desires by the use of private environments, or homes, while poorer, or potential capitalists would find their gratifications in public places and buildings of beauty, or of extraordinary utility for amusement. Such public wealth would be absent from less prosperous or very much more prosperous groups, because in the first kind there would be no capacity for its enjoyment, owing to lack of

money (and hence of freely distributed private wealth); and in the second kind the individual would have less desire for public wealth because of his greater possessions in private wealth.

In more prosperous groups the entertainment of the public would be left in the hands of private capitalists because of the ability of such to supply this want by the use of the money acquired by them from the common stock. And it is evident that these places of entertainment, while more numerous, would not be so lavish as those of a public character. In more prosperous communities, too, the public capacity for the appreciation of public art, of open places for recreation, and of public amusement of any kind, would be less than in a less prosperous community because of the greater power of the individual to gratify his desires by private means.

By this principle we can understand the very marked excellence in the beauty and quantity of the public monuments, buildings, and open places of ancient Greece or Rome, as compared with those of the modern industrial nations of Europe and its colonies. The publicly owned art and architecture of Athens and Rome were vast, in proportion to population, as compared with those of modern Europe. But the mass of privately owned æsthetic wealth of European cities is incomparably greater than that of these ancient nations.

To bring both terms of the illustration down to the present time, the quantity of æsthetic things in possession of private individuals in America is much larger than in Europe. There are fewer gorgeous cathedrals and public art galleries in America than in

Europe, but there are many more churches of pleasing design, owned by the congregations, and many more comparatively beautiful homes. Statistics of the production and consumption of musical instruments and sheet music in America will show why it is that audiences in America are not as musically critical as those of Europe, while, at the same time, the total quantity of enjoyment of the musical art is very much greater. So long as the individual finds that he can gratify his desires by the use of his own private wealth, he will not demand that they be gratified by public wealth.

It would be natural to expect that public esteem for individuals would be measured by the commercial ideas of the more prosperous community. Thus in less prosperous groups the artist or the philosopher would be more highly honored because of his ability to satisfy public taste, and great artists would be more numerous than in communities in which greater quantities of money disposed men to be capitalists. The statesman who would utilize public money in the creation of public wealth would be appraised, and the soldier, who by conquest would increase the public revenue, would be held in still higher esteem. In richer communities that statesman would be most highly honored who encompassed the enactment of laws by which industrial progress was made more facile. We should expect to find, in communities of this kind, much interference of government with industrial processes, not for the purpose of enriching the ruling classes, but for the purpose of enriching the people. This principle would lead to the production of great statesmen instead of great artists, and

would account for those industrial experiments of government which form no inconsiderable part of the political history of Europe and its colonies.

Intellectual progress would keep pace with æsthetic and moral progress. But intellectual progress does not mean the development of a few high intellects, while the intellectual state of the masses remains low. Greek philosophy was more generally understood and appreciated in Rome than upon its own soil. Thousands of Roman youths went to Athens to study philosophy, although Rome itself produced few great thinkers. This was because wealth was more freely distributed among the republican Romans and its quantity correspondingly greater. But if Rome produced no great philosophers, she produced statesmen, soldiers, and civil engineers vastly superior to those of Greece. Vitruvius may have been inferior to Phidias as an æsthetic architect, but his written works deal largely with *domestic* architecture. They disclose the fact that private wealth was more generally distributed in Rome than in Athens, even though the public art of Athens was very much superior to that of its more wealthy neighbor. And it will be observed that such public architecture as was found in Rome was more useful than, if not so beautiful as, that of the Greeks.

The government of Rome built better roads, better ships, and better implements of war than did the Greeks; while the water and sewer systems of the Romans were unknown to the Athenians. The same superiority in all the economic arts is observed in Rome. In Roman houses of even moderately prosperous citizens there was always provision for a

library, showing that the circulation of literature was general in Rome, although Roman poets and philosophers were distinctly inferior to those of Greece. The homes of many rich Roman nobles were more usefully beautiful than the buildings of the Acropolis.

When we draw similar comparisons between modern communities, we will find the same principle illustrated. In America the average wealth of the citizen gives him a high capacity for wealth-using as compared with that of the average European citizen. There is hence a larger display of private wealth and a smaller display of public wealth. America does not develop a few great æsthetic architects, but numerous architects for the gratification of private desires. American youths flock to Europe for the study of science, although the United States has developed few great scientific intellects. The circulation of literature is very much more general in the United States than in Europe. American invention is proverbially in advance of that of other countries. These facts may be explained by the greater freedom in America for the use of capital by comparatively large numbers of individuals, and for the consequent more general state of private wealth.

As we have already said, the assumption of the control of money by government would involve control of other things used by government for military purposes. But government occupation would be found, as in the case of money, to facilitate private capitalism, and thus the function of control exercised by the government would pass from a military character into an industrial character. In this way government monopoly, and government control of in-

dustry, would be produced and developed so long as it would be found to facilitate economic freedom for the many. But as soon as experience taught that such monopoly or such control hindered economic freedom, it would tend to disappear. Thus we should look for permanent government control of those economic functions which long and repeated experience had taught were conducive to the freedom of the most people in the acquisition of private wealth.

Government would therefore control, primarily, the land, because land is the basic part of capital. Protection in his private rights would be highly desirable for the capitalist, and public protection would be more efficient than private protection. Channels of communication and transportation would also fall under the control or ownership of government, and the private capitalist would find that his freedom would be best served by common property in land used for roads. When private ownership of land would be found greatly to hinder the freedom of the military or economic mechanism, that part of private wealth in land which obstructed economic freedom would pass over into the category of public wealth, there to remain. From these forces would arise the right of eminent domain and its usufruct. Confiscation of basic capital would thus be approved by the moral concepts of the majority when it would be found that this action would be beneficial to the many, although conceived by the few to be injurious. In the same way confiscation of secondary capital, or money, would be justified by moral concepts so long as it would be conceived to enlarge the freedom of the individual in the pursuit of wealth. From

the play of these forces would arise the right of taxation.

But this discovery of the power of taxation would complicate the relations of the government with private capitalists in a very intricate manner in those groups which had discovered symbols of capital more complex than mere money. By these new instruments of capitalization large and long-continued public debts would be made possible, because the debtor could hold indefinitely in his possession symbols of right to capital, while his wealth would be increasing itself by public service and taxation. There would thus arise a new financial relation of government to capital, by which the government would tend to exercise direct control not only over the money of the realm, but also over such part of the new instruments of capital which took the form of money. By this principle government protection would be beneficial to the individual by its regulation of the money-issuing functions of private capitalists. Once this desirability of government control would be perceived, that function would not pass again into the hands of private persons. It could not so pass because capitalists, in the mass, would have learned that their liberty for the pursuit of wealth would be better served by public function than by private function.

As the relations between government and capital become more complex, the government assumes increasingly large numbers of industrial functions, all of which are found to help the free action of the economic mechanism, and hence the more general flow of wealth to the many. Thus public function

has replaced private function in the means of communication most freely used because of its cheapness. No system of communication, privately owned, could be so cheap, so safe, and so extensive as that of the postal service of the world's nations. Capital used in this industrial function is public capital, and the wealth in that capital can never pass again into private possession because public postal service facilitates the economic purpose of society, and furnishes instruments for wealth-getting protected by all the military power of the state. Governments have instituted consular services, departments of labor, statistics, education, agriculture, commerce, industry, posts and telegraphs, fisheries, geology and geodesy, meteorology, insurance and marine, mines, and numerous other economic and intellectual instruments which have been found to be useful in promoting the freedom of the economic life of the community.

The assumption by the government of these functions is approved by the moral sense of the people, because it requires very little experience or penetration to perceive that more efficient and cheaper service can be rendered by public function than by private function. The efficiency of a public service is maintained by the constant pressure of the social motive to which the public service ministers. The wealth earned by public servants is seldom large enough for the satisfaction of more than their basic desires. Hence deterioration of the quality of their service would mean loss of place and economic discomfort for themselves. Whatever may be the nature of the public service, its efficiency must enlarge

to meet the growing capacity for economic freedom in the mass.

It is manifest, too, that all that is needed for this progressive transformation of private capital into public capital is the perception by society of the new relation to the environment which is followed by the transformation itself. These perceptions are only *discoveries in economics*. They are no different in their nature from discoveries of any other kind. They followed, in perfect sequence, the discoveries made by men in their private relations to one another. Change from the moving to the fixed habitation followed the discovery of agriculture. By that change the uses of money were made larger and more complex. Growth in kind and degree of capital followed the discovery of metallic money. Military relations forced government to take over control of the mints.

This control was found beneficial to social freedom. The discovery of commercial, or negotiable, paper was followed by wider liberty in the creation and accumulation of private wealth; and government, in assuming control over this new form of capital, was found, in the process, to enlarge and make safer the freedom of the individual. The discovery was quite as "accidental" as any other discovery, and was only the perception of a new relation to the environment. Other discoveries, by which the category of public wealth was extended to things which were before classified with private wealth, were made as the environment grew in quantity and kind.

New relations of this character would be discovered by some groups and not by others, and for the same reasons that new uses for familiar things are

discovered by some individuals and not by others. These reasons, as the reader will probably remember, are found in the rise of a new idea from the contact of the complex of ideas in the brain with a complex of relations between parts of the environment. If there is any "accident" in nature, it is of this description. The progress of Europe since the fifteenth century has consisted only in the multiplication of such discoveries in the economic, æsthetic, intellectual, and ethical aspects of social motion. If China has not made any progress in that period, it is only because it has made no discoveries of a similar kind, and because its moral conceptions have regarded as repugnant the utilities developed by Europe. It will be manifest from all this that if progress is to be carried farther it must be in the same direction and by the enlargement of the same processes by which it has been carried forward in the past. Social progress cannot be made by concentrating capital in the possession of a comparatively few. It can be made only by a process the reverse of this. And it must be remembered that the test of the social value of all discoveries lies in the application of the moral sense of the majority to the desirability of the results of the action to which the discovery is put.

If, for example, the control of money by the government were found to hurt rather than help the accumulation of wealth by the masses, the masses would condemn such control as being wrong. Government would therefore abandon the control of money. The same logic may be applied to all other discoveries of new governmental relations. But as

the capacity of men for the possession of wealth increases geometrically with new possessions, we should expect to find government undertaking functions beyond the economic possibilities of the environment. That is to say, it would attempt the impossible task of distributing wealth which did not exist. Before government can use capital in a manner beneficial to the masses, natural economic forces must have produced instruments of capitalization which government can utilize. Thus, symbols of wealth are useful to government only as there is real wealth out of which they arise. A cheap or debased currency has been always found to hinder and not to help the freedom of industry. The power of government is, in its nature, and always was, essentially capitalistic. It exercises, in a public way, the same power which the capitalist exercises in a private way. It secures services for the public which assist the public in the accumulation of wealth. Its political power is based upon economic utility. A government is deemed good or bad in the degree in which it expands or contracts the freedom of the pursuit of private wealth. Its *raison d'être* is the preservation of the group's integrity from within and from without. And all its activities are conducted by means of the use of the most desirable parts of capital. This truth becomes self-evident when we remember that government itself is only a social machine by which the social body is enabled to live and propagate.

The rulers of a country would discover, as we have indicated, that control of parts of capital, and of the relations of capitalists, would help social

progress. This discovery might lead to certain delusive conclusions concerning the power of the government in this direction. False popular beliefs would naturally arise, and we should expect to find political superstitions in prosperous communities. The true relations of money to economic freedom not being fully perceived, government, seeking to satisfy the popular increment of capacity, would be disposed to dilute the currency under the delusion that the value of money and the value of all other forms of wealth were not reciprocal. But this superstition would tend to disappear as the true relations of money to other parts of wealth were perceived. It would be found that economic freedom would contract with dilution of the currency, whether that dilution were made for the purposes of confiscation by the ruler, or for purposes of larger wealth for the masses. Dilution of the currency, as well as all other over-exercise of the taxing power, would become repugnant to the moral ideas of the masses as this excess of government function became associated with ideas of pain. In prosperous communities we have not, therefore, observed any recent attempts at dividing non-existent wealth by this method.

But there are other political superstitions which still exist in full force, and only because the true economic relations of government to social progress remain as yet unperceived. One of these is the delusion that a tax upon industry operates so as to make industry more free. Popular beliefs that "protection" increases wealth are of a kind with the belief that dilution of the currency does the same thing. Both are mere attempts to create wealth by

enactment of law and then to divide the wealth thus miraculously manufactured. The reason why the one superstition does not disappear is because the resultant pain is less severe, and is not readily associated with the idea of protection. The relation of money-capital to production is comparatively simple. That of taxation for protection to industry is comparatively complex. The one is easily perceived. The other is more laboriously perceived. Hence the superstition of protection remains in many prosperous communities. But such communities are prosperous not because of protection, but in spite of it.

Such illustrations as these could be multiplied indefinitely, and could be pointed out in the common-places of current comment upon trade and its governmental relations. But the reader will find no lack of these for himself. Conflicting beliefs as to the causes of "good times" and "bad times" are open for the inspection of anybody who cares to examine them, and it will be self-evident that all of them cannot be true. Indeed, we cannot be far wrong if we classify all of them under the head of superstition. What we have said thus far in this book will be of small import if that conclusion is not already plain.

More useful, however, will it be to consider popular economic, political, and moral ideas which are not superstitious. These, it is clear, are conceptions of the real relations of government and private capital to social progress. Governmental use and control of money has been found to be highly beneficial to the freely moving lives of men. That idea is organic in all prosperous and progressive groups. So long as

present uses for money endure, a very considerable part of it will always continue to be public wealth. The control of the currency can never lapse into private hands. The ideas of right arising out of government's relations to money forbid it. The ideas of eminent domain, of taxation, of governmental services, of public education, all forbid it. And this is true because men have perceived the true relations of this form of capital to government and to social progress. It is admitted by everybody, without dissent, that money, or its derivative form of capital, is the most useful instrument, as yet perceived, for the accumulation of wealth by the masses. This truth has become self-evident.

It will hardly be a matter for dispute if we say that improvements in machinery have been the cause of an increasingly even division of wealth among increasingly larger numbers of individuals. The term "machinery" will cover all devices for the purpose of production, communication, and transportation. Out of the growth of mechanical invention arose the factory system of production which replaced the simple system previously existing. By the factory system the number of prosperous capitalists would be continually increased. The new wealth created in this way would redound to the workers, as these could be the only consumers of product in quantities large enough to increase the wealth of capitalists. But this reflux of wealth could act upon the producers in one way only. It would serve to enlarge the utility-capacity of the wage-earners for the possession of still larger shares of the product. As we have seen, the increment of capacity would itself be subject to

an increase, and wages would tend to rise. But with rising wages population increases. Wages would oscillate above and below a norm *determined by the productivity of industry*.

It is needful to make this conception clear. It should be manifest that at any given moment there could be no demand for labor beyond that quantity required for the operation of the productive apparatus, land included, to its highest possible degree of productivity. A capitalist, operating his plant to its limit, could not engage the services of more laborers than those required for such operation. When, therefore, the number of laborers would be larger than that required for this purpose, wages would fall. On the contrary, when the number would be smaller than this requisite, wages would rise. It will be observed that in a progressive community, the absolute quantity of the producing instruments constantly increases.

But there is a disproportion between the increase of capital and the increase of population. Each new "dose" of capital would be larger than the needs of the total population as increased by rising wages. This disproportionate increase of capital would be due to the multiplication of the number of capitalists and to the extension of already existing plants by *entrepreneurs*. It would further be aided by new inventions and by the advance in the efficiency of machinery. The basic forces at work in this process are found in the enlarged capacities, among men generally, for the possession of wealth. Multiplication of capital would result in over-supplies of product and this redundancy would cause a fall in the price of commodities, labor included.

A paradox in economics here suggests itself. How can we account for capital lying idle at times when there is sufficient labor to operate existing apparatus nearly to its full capacity? It would seem, if our principle be true, that there could never come a time when population would outstrip capital if the increment of capital were disproportionate to that of population. But this paradox will be explained, when we remember that the law of wages we have here described is subject to a modifying force found in the action of the sublimated forms of capital known as commercial paper.

This force is a purely psychic one. Private capitalists are no less eager to divide imaginary wealth than are legislators. The rapid incrementation of capital is accompanied by what is known as "inflation of values." As soon as men begin to perceive that they have been dealing largely in imaginary wealth, they immediately set to work rearranging their sublimated forms of capital so that they will represent *real* and not *imaginary* possessions. The producing capitalist is therefore constrained to cease production until psychological values are in equilibrium with the producing power of industry. Large as the quantity of real wealth may be, it is not so large as it is believed to be. If men who have money refuse to allow that money to be used for productive purposes, it matters little whether the producing power of the economic apparatus be great or small. And such refusal will be persisted in until ideas are reduced to true perceptions of real wealth. It will be seen, however, that in spite of these temporary reactions, and these recurrent over-supplies of product and of labor, the

absolute quantity of productive instruments and the absolute quantity of population, in a progressive community, would steadily increase.

Wages, therefore, would rise and fall above and below the norm determined by the productivity of capital at work. And if this be true, it is manifest that their movement would be progressive with the progressing quantity of capital. Wage-earners would find that they were receiving ever enlarging returns of wealth. If we describe the increase of capital by a straight line, and describe the movement of wages by a curving line, we will have a diagrammatic conception of the law of wages we have here suggested. And as the direction of the straight line is upwards, the sum of the motion of wages will be carried upwards too. This is true because the increase in the quantity of wealth to be divided among wage-earners would be proportionally larger than the increase in the number of workers to whom the increasing wealth would return. We should therefore expect to find that the lowest wages at any given time would be higher than the lowest wages at any previous time, and that the highest wages at any given time would be higher than the highest wages at any previous time. By this action the norm to which wages tend to adjust themselves would constantly shift to higher and higher levels. And this norm would lie at the intersection of the highest productivity of capital with the total labor power of the population.

The academic conception of the "standard of living" to which laborers are accustomed will hence be seen to have very little to do with the increase or the maintenance of the quantity of wealth which

flows back to the producers. It requires small penetration to see that this conception of the determinant of wages is an inadequate one. It is difficult to conceive how any standard of living could draw *larger* shares of product from the capitalist who could find a surplus of labor, however small, which could be bought for *smaller* shares.

For how is a "standard of living" to be fixed? Certainly not by the capitalist. It must then be fixed by the laborer. But there is very great variation in the desires of laborers as well as of capitalists. It would be as logical to hold that the *profits* of a capitalist are fixed by *his* standard of living. But we know very well that such is not the case. Some laborers use their wealth to rear families. Some squander it. Some save it in order to convert it into capital at a future time. The standard of living is lower at some times than at others. But if it determined wages, wages would never fall; for it will not be argued that the capacity of men for using wealth *decreases* with increase of possession, among laborers any more than among capitalists. It is wages, really, which determine the standard of living, not the reverse. And as wages constantly increase, the standard of living constantly improves.

This action of the increase of capital upon wages would have, as we have already said, but one effect upon the mind of the producer. His capacity for the use of wealth would enlarge. The increment of capacity in the capitalist would impel him to add to the quantity of instruments beyond the degree justified by the state of trade. And in like manner the new power of the producer would impel him to obtain

wealth in quantities greater than those made possible by the natural progress of capitalization. How could this desire be gratified? It should be manifest that it could be gratified in one way only, namely, by *compelling the capitalist to surrender larger shares of product than those which would naturally flow back through the operation of the wage-determining force.* The capitalist would not pay higher wages when he could secure as efficient labor for lower wages. But if he were compelled to choose between smaller profits, as a resultant of higher wages, and a reduction of his profits to a degree which approached no profit at all, or positive loss, he would probably choose the former.

Now if we suppose that laborers would find that by uniting together and forcing a choice like this upon the capitalist, they could succeed in distraining from him quantities of wealth greater than those naturally flowing back to them, we can readily comprehend how they would continue to do so. All that would be necessary to develop this kind of union, after it had once been produced, would be the perception that it was followed by increased returns of wealth. The discovery of this new relation would be of a kind with all other discoveries. It would matter little how it was made. But being made, we can see how it would rapidly become social among workers. It would be observed that trades practising it received higher wages than trades which did not. The practice would receive the moral disapproval of the capitalist, as a matter of course. He would condemn it precisely as the hereditary lord condemns a curtailment of his power. But the men whom it benefited

would not take the same view. By them the practice would be approved as being just. This idea, once established, would be difficult to dislodge, especially if the practice was found to be, on the whole, conducive to larger liberties for the satisfaction of the basic desires of nutrition and propagation.

The growth and development of trades unionism would be rapid or slow according to the selective value of association in the various arts by which wealth was created. The selective value of association would naturally be highest in those occupations in which uniformity of service-capacity would be greatest, and in which the number of workers would be limited by a necessary preparatory training. Thus those skilled trades in which the capacity of the most efficient and the least efficient workers would not vary strikingly from the average, would rapidly develop the social character we have described. Such uniformity would be assisted by the increasing efficiency of inanimate instruments. In other words, the skill of the individual laborer *would be replaced by the superior efficiency of the machine*. But the value of association would be no less apparent to workers in all those trades in which none but an insignificant few could rise to very remunerative positions.

On the other hand trades unionism would not commend itself to workers with whom potential advancement would always be present. Unionism in such occupations would be manifestly conceived to be undesirable. These trades or employments would necessarily present a character very different from those in which unionism would flourish. In them,

we should find grades of wages and potential equality for persons in lower grades to advance to higher grades. Efficiency in lower grades would promote advancement to the higher ; whereas in trades adaptable to unionism, the very efficiency developed in one trade, or grade, would tend to make change to another grade, or trade, impossible. Thus, in the inadaptable occupations, the efficient laborer would have every incentive to work for promotion while in the adaptable trades he would have none. Accompanying this difference in potential promotion we find a very significant fact. It is this: the trades most adaptable to union are those concerned with the creation of wealth ; and those least adaptable are those concerned with its circulation. Again, those employments concerned with circulation in which union is practised with favorable results, are those in which there is least potential equality for promotion.

It is only natural to expect that the value of union would be most manifest to those workers who could plainly see the impossibility of promotion. And when unionism would be ever ready at hand for use, it is only natural to expect that such laborers would use it. The use of the union would be distinctly wrong to the notions of the wage-earners who could see that by that use their potential equality — or opportunities — would be curtailed. But once they begin to see that opportunity for promotion is largely imaginary, and that they are counting, not upon real potential increase of wealth, but upon increase from wealth which has no existence, they tend to regard unionism with increasing moral approbation.

We should thus expect to find that trades unionism,

or a principle very like it, should tend to influence the ideas, if not the conduct, of wage-earners in branches of industry more and more removed from the actual occupations of production. This change of ideas would be no more than the growing perception of a relation between labor and capital easily and long before perceived by those whose employments left no room for superstitious conceptions as to the nature of the division of wealth.

It would seem to be clear from the foregoing that the ideas of wealth-division which have caused the development of labor unionism in enlightened groups are true ideas and not superstitious ones. Unionism has been found to be good. It has given higher wages to those who practise it. The method of unionism is extending to wider and wider circles of workers. There is no question in the mind of the producer as to the efficiency of the method he uses. He is not puzzled with that uncertainty which attaches to other methods. He does not clearly understand the method proposed for his betterment by changes in the currency, or by a change in the system of taxation for protection to industry. The method of trades unionism was not suggested to him by a statesman. The discovery of its power was made by simple repetition of experience. The simplicity of the method was as great as the simplicity of other methods which had been quickly perceived and quickly compounded with social motion in general. Like many other methods of righting conceived wrongs, it was based upon force. Like them it was approved at first only by the few whom it benefited; then by the many whom it benefited; then by all

those who at first conceived it to be injurious to themselves; and lastly by the highest instruments of government, which have asserted, after much procrastination, that it is an inalienable *right* to be enforced by the military power of the state, if need be.

In considering the relations of government to capital, we have been led to the conclusion that when true relations of this kind are perceived, they at once become organic. We should expect, therefore, that as government is the most powerful implement of force in a state, it should be called upon to assist the process by which wealth is divided in more than a merely passive way. Government control has been found to be the most highly efficient method of enlarging liberty when it uses capital for this purpose, and only when it does so. But the use to which it puts capital, if this use is to be desirably effective, must be essentially the same as the uses to which capital is put when it is in private hands. That is to say, the use must result in the creation of new capital, or in easing the social motion which issues in ever enlarging returns of real wealth to ever enlarging numbers of individuals. This is the theory upon which is based all subsidy of wealth for the creation or enlargement of the industry of the people. The purpose of subsidies is easily understood by the most uncultured men and readily approved by them.

When government uses capital for purposes other than these, the effect upon the community must be painful, and such use will be condemned as wrong even by that individual who is perfectly guileless of statecraft. We should therefore expect to find that, in the more progressive communities, the quantity of

public capital, whether it be in land, or in subsidized land, or other forms of wealth, should be larger than in less progressive states. There should likewise be found relatively larger quantities of non-productive public wealth in poorer communities than in richer ones, because in poorer communities the use of private wealth for pleasure would be comparatively contracted. Common moral ideas would approve the public use of capital, in any manner whatsoever, so long as such use would be seen to redound to the public good, and the term "public good" is equivalent to "equality in wealth." This would be true in spite of all ideas to the contrary held by the individuals whose liberties in obtaining wealth would be contracted by such public capitalization. "Competition" with government is an organically undesirable idea with capitalists. Yet this disapproval of the few whose freedom would be restricted would have no influence on the common idea of right and wrong in this connection. Moral progress does not consist of morality in the few but in the many. The definition of moral progress arises out of the definition of economic progress.

If, now, we admit that social motion is in the direction of a perfectly even division of total product among all, it is clear that this purpose can be encompassed only by the enlargement, rapid or slow, of the category of *public wealth in capital*. And it is clear also that the more rapidly the category of public capital increases, the more rapid will be the acceleration of social motion toward that level of wealth we have assumed to be the permanent equilibrium of social forces. If any conclusion other than

this be drawn, it must be one which holds that social forces are flowing in an opposite direction, and this conclusion is shown to be false by the most conspicuous fact open to the most casual observation. So long as capital remains in private hands, there must be capitalists and wage-earners. And so long as there are capitalists, protected in their rights by the military power of government, there can be no limit to their psychic capacity for the possession of the things by which wealth is created. Indeed, as we have seen elsewhere, the desire for possession will be found, in some extraordinarily developed instances of incrementation, to be limited only by the whole quantity of capital to which the property right extends.

The action of this capacity may be limited by the action of wage-earners who, by association-force, dis-train increasingly large shares of the wealth created. But the *instruments* of creation, which are essentially the most desirable form of wealth, must remain in private hands, and will continue so to remain as long as most individuals believe that their desires are best served by this method. But if we suppose that a change of opinion should be produced, no matter how, it is evident that the change could be followed by but one action. That action could take only the form of a restraint from capitalists, not of parts of their profits, but of *additional parts of capital itself*.

The higher forms of capital we have considered, in the form of stocks and bonds, confer upon the directing capitalist, as we have seen, the peculiar power of appropriating undue shares of the product from his non-directing partners. They give him a

higher power than even this. They enable him to take from the many, who are *not* his partners, quantities of wealth which, were it not for this power, would flow back to consumers of every kind, whether producers or not.

However large may be the number of non-directing partners or shareholders in capital, they cannot prevent the directing capitalist from thus appropriating wealth which they consider their own. His action may be *legal* enough, but legality or the reverse plays no part in the desire of the many for wealth. The essential fact is this difference of power. The instruments of capitalization confer this power on the director and do not confer it on the others. Thus it will be seen that although the number of capitalists has been very largely increased by the new methods of capitalization, these methods, if incomparably superior to the old, do not insure a perfectly proportional division. And the most important consideration is not that which concerns the power of the directing capitalist over his partners, but that which concerns his power over others. These latter make up the very great majority of the individuals whose liberties are affected by the new method. We should look for the advancing moral ideas of the many to issue in action sooner than those of the few. For the comparatively small number of non-directing partners would not be impelled to restrict the power of the director if they conceived that such restriction would issue in restriction of themselves.

We would therefore find moral ideas of three kinds with respect to capital in progressive groups. First, the ideas of the directing capitalist, who would deem

it wrong to restrain his power of accumulation in any manner whatsoever ; secondly, the ideas of non-directing capitalists, and of capitalists without partners, who would deem it right to restrain the director from the use of such power ; and, lastly, the ideas of all others who, it is manifest, would not be capitalists at all. These last would not only deem it right to restrain the use of the power of the director, and of his partners as well, but to *deprive them of their very power itself*. But the outcome of such deprivation could manifestly take no other form than the forcible transfer of that kind of capital used in the exercise of the power over to the category of public wealth.

There is no other alternative, and it is not difficult to see the truth of this statement. So long as capital, managed in this way, — that is, by the new and compound method of capitalization, — remains in private hands, the power we have described will continue to exist. So long as it exists it will enable capitalists, directing and non-directing, to acquire ever enlarging shares. These new acquisitions will only serve to intensify and extensify the action by which the wealth of capitalists is enlarged. We must accept this conclusion. If we refuse to accept it, we will be driven to hold that an increase in wealth does not increase the desire for wealth, but lessens it. As for the latter conclusion, we hardly believe it will be insisted upon by anybody. There is no conceivable escape, then, from the first conclusion.

It is not difficult to conceive superstitious ideas concerning social progress. We can conceive of a capitalist becoming so sated with possession as voluntarily to surrender his power, and voluntarily to divide

his product equally among the producers. We can conceive of *all* capitalists doing the same thing. And we can conceive of social motion reaching its level by a process of this kind. But such ideas as these are not organic in society, because they are false ideas, and the number of persons conceiving them has been insignificantly small in all human history. They are repugnant to common experience and to the common conception of self-interest. The ideal altruist, admirable enough in the abstract, has been set down always as a man of highly impracticable ideas, and is so set down to-day, if not in exact words, at least in universal practice. That philanthropist who gives *all* his wealth to others is regarded as an anomaly, if not mentally unsound.

The only true conception, then, we can have of social motion, is that found in the idea that it is right to limit, by force, or to take away altogether, the power of the individual to accumulate wealth when such action is conceived to be hurtful to the freedom of the many. That this idea is organic in progressive communities will be clear when we remember the state of opinion which prevails in the United States of America. We instance that group because the idea there has assumed its extreme form. So long as vast accumulations of capital were not conceived to interfere with social progress, such accumulations were approved by the popular moral sense. But as soon as this opinion was changed, the popular moral sense began the reverse action. The *method* of accumulation had nothing to do with the change of the moral idea. The selfsame act which was once approved as right was now condemned as wrong.

There had been no change in the motive of capitalists. The change in the method of capitalization had been approved at first. It was not condemned at last. But the *result* of the method was very distinctly condemned and is condemned to-day. No capitalist is now conceived to have a *right* to such power of accumulation. The moral sense attaches but a vague condemnation to the desires of the capitalist for unlimited possession. That is because the community is very rich in private wealth generally distributed. For if it were not thus rich, there could be no perception of the injustice of extraordinary possessions in comparatively few hands. This latter state would then be organic, as in Russia.

Let it be considered, too, that conceptions of justice concerning wealth always concern relative and not absolute wealth. The individual measures the justice of large or small possessions for himself or others by his *own capacity* for the use of possessions, large or small. If his capacity be large, he desires large possessions; and if he believe that large possessions for others involve small possessions for himself, he will conceive of such large possessions as being wrong. But to develop this idea it is only required that the quantity of his wealth should constantly increase, and that the method of division should not be so rapidly altered as to satisfy his ever enlarging capacity for the use of wealth. Thus it is that in America we find a constantly increasing effort of government to curtail the power of the capitalist, not over the wealth he produces, but over the *capital he controls*. And this is the one action we have seen to be the only one possible if the observed flow of social

forces is to continue in the direction they have taken in the past and are taking in the present time. If it seem to be paradoxical that the moral sense of a community should condemn conduct which seems to have been beneficial to the masses, the paradox will be explained when we remember that what was once deemed good is now deemed bad. We must not counterpoise present capacities with past wealth. The laborer who was formerly contented with a wage very close to the subsistence line is now discontented with a wage very much above it.

If, therefore, we find that government seeks above all else to distraint from the capitalist ever enlarging parts of his wealth through government interference, not with his wealth, but with his *capital*, we should be prepared to conclude that the *true* relation of government to capital is being perceived by the masses, of whom the government seeks to be the most efficient servitor. The fact that government use of large parts of capital in money is beneficial was easy to perceive. The broader fact that entire government control of money is beneficial was also easy of perception. The fact that government control of the new method of capitalization is good is now so well perceived as to have become organic in at least one progressive community, and that one the wealthiest in the world. The still broader fact that government *use* of the things which create wealth is the only conceivable method by which private use can be replaced, is in process of being perceived and in rapid process. Once perceived as clearly as have been the other facts we have indicated, and action must follow in precisely the same way.

There is yet to be considered a conception of philanthropy with which we have not dealt. Philanthropy, as evidenced by the bestowal of wealth upon others, is a social fact of great importance. But its true relation to social progress will be perceived when we regard charity as an *effect*, and not a *cause*, of the flow of social forces. If charity, or philanthropy, is held to be more than a derivative, collateral, or confluent cause of social motion, we are met with insuperable contradictions of thought. It should be understood at the outset that we do not contend that wealth given in charity to others has not the same effect upon those benefited as does wealth acquired in any other way. We know very well that it has. Possession, no matter how encompassed, increases capacity. But the desire to give freely to others is not a basic desire, and hence not a natural or inherited character. It is always an *acquired character*. If this be true, it would follow that charitable desires are not a cause but an effect of social motion.

Looking broadly at philanthropy, we cannot say that it has had much effect upon the progress of society. History supplies few examples of the strong man surrendering his state from purely altruistic motives. Such surrender has almost always been an enforced surrender. We take no account of *post obit* gifts, for a man cannot be held to surrender anything when he is dead. And very generous bequests in charity are so rare, even in the present time, as to excite unusual comment. If we compare the effect of charity upon social progress with that of the other forces considered thus far, we will have to admit its evanescence.

It must be admitted also that every restriction upon the action of extraordinary capacity for possession has been enforced upon the few by the moral sense of the many. Moral force is one of the essential factors of the civilizing process. The degree of violence necessary in the act of limitation may always be measured by the strength of the government in which the reform is desired. If the government be strong, the degree of violence will be high. If it be weak, the degree of violence will be low. But in prosperous states government is always weaker than in poor ones. This is the fact because the more equable division of wealth must ever develop more equal political power for the individual. If the power of government be essentially capitalistic, we should expect that in a community in which capital is generally distributed the political power of the masses should be very high. And in proportion as the number of capitalists would be large, we should look for the group to be democratic in character. It is hardly necessary to say that such are the observed facts of history.

Restraint, then, of the greedy minority would be easier in prosperous groups than in the reverse, but that restraint would be none the less of a forceful kind. The surrender of wealth, or of power to acquire it, would therefore be an enforced and not a voluntary surrender. That surrender becomes voluntary only when by it the individual does not lose his power to acquire. We have seen that economic forces are convertible into moral forces. If this be true, we can conceive of an ever increasing majority pressing the rights of an ever decreasing minority to the

vanishing point. But it will hardly be contended that the ideas of the minority are the *cause* of the pressure, and we would be compelled so to contend if we held that charity is the cause of social motion. When we see the pride of descent from noble ancestors surviving in remote descendants, we can hardly be justified in believing that the idea of nobility will become repugnant to all men until all nobles have been eliminated. When nobility itself shall have ceased to exist, it will be because a majority has so willed it. And whenever a majority has taken this action, the action has been of a forceful kind.

It is entirely possible to conceive of a moral state in which private capital would be condemned as nobility is now condemned in the United States of America. But we cannot see our way clear to conceiving that this state could be brought about by the voluntary action of capitalists. If England had waited for the king and the nobles voluntarily to curtail their own power, the state of England would not be as free as it is to-day. We can conceive of a capitalist becoming so very charitable as to be moved to turn over his capital to the public. And we can conceive how this action might be followed by the more or less forcible confiscation of other capital. With the elimination of capitalists altogether, we can conceive of a common moral sense to which private capital would be highly repugnant, as we find a moral sense in America, to-day, to which the notion of nobility is highly repugnant. But we cannot conceive that this organic moral idea could be produced by any method other than that we have found to be normal in social growth. That method is dis-

traint by force, and by force of popular opinion aroused by increase of general wealth.

In this discussion we have dwelt only upon philanthropy when its action is caused by genuinely altruistic motives. Such charity as is caused by egoistic motives—and by that term we mean gifts for the sake of the honor they bring to the donor—is no less a confluent cause of progress than that produced by altruistic motives. It is caused by the motion of the main body of social forces, and although it swells the current of progress, it is drawn into the flow by the superior force of the flow itself. This principle will be best illustrated by the effect produced by labor unions upon capitalists. These associations have won every step of their way by methods of force, and in the beginning of their existence by perfectly lawless deeds of violence. The method was condemned, not only by capitalists, but by a far more numerous part of the communities in which the method was used. But with the extension of the method, and with the general perception of its efficiency, it was approved first by the common moral sense, and then by government. When capitalists found that by yielding to its force they were conserving their capital rather than dissipating it, they accepted the method as being most opportune. And lastly some capitalists, in order to secure quicker and surer means of conservation and increase, ostentatiously accepted it. The principle of force in labor-unionism thus became organic in progressive societies.

But who will contend that the result produced by labor-unionism could have been produced by the

voluntary surrender of wealth by capitalists? If the force of union were withdrawn *now*, would not capitalists quickly resort to the ancient methods? Should we not expect that the acquired character of union-contract between labor and capital would give way to the former character of individual contract? And would not this reverse process tend to eliminate those capitalists who, in order to gain the good opinion of men, ostentatiously bind themselves to surrender larger shares of their wealth than the actual producing power of their capital would make necessary? Ostentatious charity, therefore, may be regarded as of a kind with the ostentatious liberality of capitalists, and the ostentatious "democracy" of kings. And all these are mere capitulations to force. They have as little to do with the basic causes of social motion as has the rotundity of a planet with the motion it takes about its axis. To conceive of the sphericity of a planet as producing its axial rotation is as logical as to conceive of charity producing social growth. The planet is round *because* it rotates. Remove the force of rotation, and the planet will instantly assume a form very different from that produced and maintained by its axial revolution.

Before concluding our discussion of the nature and causes of economic progress toward an equal division of wealth, we must touch upon one last and essential conception. This is the method by which capital must pass over from the category of private to that of public function. What we have thus far written will have been to no purpose, if it be not now clear that the function of government is entirely and essentially capitalistic. That it is a true conception is

made manifest by a very careful analysis of government itself and its necessity in progressive social groups. Government and capital are the two most important social facts arising, with all their complications, from the fundamental relation of the cumulative environment in the unchanging locality. That there is a causal nexus between the two facts should be apparent upon the slightest consideration. Government is most necessary in those groups in which the use of capital is most widely diffused. The diffusion of political power can always be measured by the diffusion of capitalistic power. In the degree in which an individual possesses wealth will he be powerful with a highly centralized government, and this kind of a government is customarily and inaccurately denoted by the term "strong." But true strength of government does not pertain to centralization, but rather to diffusion of political power. In highly capitalistic countries the government is strong in its enforcement of the moral ideas of the many against the moral ideas of the few. Thus we find that economic progress is accompanied by ethical and political progress. The first is the cause of the two others.

In the most highly capitalistic communities, too, we find that true ideas of government relations to capital are most widely diffused. In them government is most used to enlarge the freedom of the masses, and least used to enlarge the freedom of the few. If it is weak in the latter function, it is strong in the former. This principle may be generalized by saying that the diffusion of political power varies with the diffusion of capital. If this be a true law, it is manifest that motion which accelerates the growth of demo-

cratic government can act in but one way. That is, it must draw *government and capital ever closer together*. But there must be some limit to this proximation. And the only conceivable limit is that which is found in *actual contact*. It is hardly necessary to point out that this contact can be none other than the actual *use* of capital *by* government in most of the functions for which capital is used. There are but two other conclusions. The first is that the economic motion can be brought to a stop while the political motion continues. But we cannot accept this conclusion, because political progress has been found to be dependent upon economic progress. The second conclusion lies in the conception that political and economic progress consists in the centralization of political and capitalistic power in the hands of an ever decreasing minority. And this conclusion, upon its face, is absurd.

Apparent exceptions to the law of capital we have here suggested will be explained when we examine *into the nature of their causes*. In the United States of America, admittedly the most prosperous community in the world, there is least actual government use of capital for purposes of the actual creation of wealth. If the law we have suggested be true, there is here a paradox. But when the total sum of capital used by government in America is compared with that of other groups, it will be found to be proportionally greater. We must include in this category all grants of land for railroad and shipping purposes, and all subsidies, and we must fix their quantity at present values rather than at former values. We must likewise include all wealth used for purposes of

education and for protection to property in general. In a word, we must include all government wealth whatever may be its uses. If there is less actual production by government in the United States than in some less prosperous communities, there is also more direct interference by government with the mechanism of production and trade.

There are numerous laws framed for the limitation of private capital which do not exist in less progressive groups in which government is more active in the creative function of capital. American moral ideas in the matter of the limitation of private capital are far in advance of those of Europe. And as moral force is the efficient cause of the mutual attraction of government and capital, it will be seen that in America the sum of the movement has been carried farther than in Europe, although, in the latter, government may be in actual contact with capital in many ways not observed in the former. Again, the military system of Europe is facilitated by government capital, and this would cause an acceleration of the motion in those particular industries useful for military purposes, but not in others. The degree of proximity between government and capital is therefore lower in Europe than in America. In the former the contact extends to few industries and those closely associated with the military needs of the group. In the latter, the process of proximation is observed to affect industries of almost every kind in no way associated with military needs. In other words, public capitalization in Europe is almost wholly of a military kind; whereas in America public control of capitalization is wholly of an industrial kind. The first process finds its equilib-

rium quickly, and the general proximation proceeds more slowly with the increasingly even division of wealth. The second process—that observed in America—finds its equilibrium more slowly than the first, while the general proximation is more rapid.

But if we conceive that in the latter process the equilibrium be once reached in *any particular* branch of industry, we can readily conceive how it must be quickly reached in *all*. For the purpose of government contact with capital in America is not military, as in Europe, but industrial. It has no such limitation, therefore, as we observe in European groups. The military well-being of the group is not sought in any manner when government is used in America to place bounds upon the desires of capitalists for vast possessions. The only aim in such action is the prosperity and liberty of the masses. Any attempt of government to contract that liberty, by taxation for military purposes, is vigorously reprobated by the common moral sense; whereas all attempts to expand it receive the highest popular approval. Thus it is that military proposals are little understood and regarded with small attention in America, whereas proposals to encourage industry receive prime consideration and careful scrutiny. The statesman with an economic programme is listened to attentively. The statesman with a programme in which the economic and political relations are not clearly perceived, receives very scant respect.

Something of a reverse order is observed in Europe; and if these facts have any significance whatever, they would seem to indicate that, in America, the true relations of government to capital

are more generally and more clearly apprehended than in Europe, and that government and capital in America have drawn more closely together than in many of the other democratic states of civilization.

The conception that public ownership of capital is to be produced by the gradual centralization of wealth in a few hands would thus appear to be a false one. It is based upon the highly erroneous idea that as men grow poorer, their capacity for the use of wealth increases. The error is due to a fundamental misconception of the nature of growth of any kind. It is only one of the innumerable misconceptions of metaphysicians in general, and these are all occasioned by a superficial examination of causes. A theory which holds that expropriation of the many by the few will, in the end, cause an abolition of private capital, is a theory self-contradictory at its root. We know that the capacity for the use of wealth progresses with increase of possessions. The proverb of the beggar on horseback is only the commonplace perception of a homely truth. The apparent desire of the beggar for wealth he is incapable of using is a delusion which vanishes the moment that wealth, beyond his capacity for use, is placed in his hands. We can imagine him very rapidly acquiring increased capacity as his possessions become enlarged. But we cannot imagine an unlimited capacity as being instantly produced, unless we admit into the theory the element of the miraculous.

Political democracy is an effect, not a cause, of economic progress. We must not expect to find a community in which the diffusion of political power

can be far in excess of the diffusion of economic power. As the power of government and the power of capital are convertible terms, we should not expect to find a community in which capital is centred in a few hands and political power diffused among the many. In such a community the right of the few to expropriate wealth from the masses would be organic, and the moral element of progress, which, as we have seen, is essential, would be absent. The social progress through which such a group would pass would tend to produce ever lower and lower levels, above and below which wages would tend to rise and fall. The producing power of capital would shift to lower and lower norms. The aggregate wealth would decrease, and with this decrease would go hand in hand a progressive decrease of population. Internal military power would wax, and military power for external defence would wane. Economic, moral, æsthetic, and intellectual capacity would decline together. With this action of expropriation going forward, we can readily conceive how a highly civilized state could be reduced to the level of mediæval feudalism; but we cannot conceive that the action would terminate suddenly in the opposite effect.

Sudden revolutions, in which political power is struck down from a king or a class, are only violent readjustments of the political to the economic state of the group. If highly false political ideas arise in the process, there must follow new readjustments until the equilibrium is restored. If public capitalization be attempted, as in the French revolution conspicuously, the attempt must fail, because the

instruments of capitalization have not been developed to a degree which admits of easy transfer, and because the true relations of government to capital are not fully perceived. The abortive change indicates that they are partially perceived by a few. But the few who perceive them are encountered by the moral sense of the many, to whom ideas of private capitalization are highly grateful. And if these ideas are grateful, it is because the private use of capital has not risen to that high degree which arouses a moral sense favorable to a restriction of the private capitalistic function.

We may safely say, then, that the shifting of moral standards to progressively high levels brings about the approach of government to capital. Action is taken, and can be taken, only when the moral force in a community gathers sufficient strength to overflow upon the boundaries of the freedom of capitalists, and to cause that freedom to contract. When this overflow takes place the true relations between government and capital are beginning to be perceived. The capitalistic activities of government at once begin to expand in a manner at once approved by the common ideas of right and wrong. Such activities had been condemned yesterday as highly hurtful to the economic liberties of the many. To-day they are approved by all except those with whose freedom they interfere. But the desire of the few is conceived by the many to be hurtful to the happiness of the many, and is condemned by the many as the quintessentiality of wrong. And as the wealth of the many is greater than the wealth of the few, the force of the many preponderates.

If, now, there is no way but one open for the flow of this preponderance of force, it must flow in the direction so conceived. That direction, as we have every reason to know from the data before us, is toward the *actual contact of government with capital for true capitalistic purposes*. These are the creation and distribution of wealth. The motion which has borne society forward has carried it toward an equal division of the things created between the total number of individuals creating them. This is the purpose at which alone can be brought to an end the forward flow of social forces. And as government use of capital is the only conceivable method by which the flow of social forces can reach that end, that is the method which must be used. It is the only method which shall completely satisfy the rapidly growing increment of moral capacity. It is the one method which the actual development of the instruments of capital makes necessary. It is the method which implies the clearest perceptions of the true relations of government to capital; and it is the method used by the one species of social organism, other than human, that has found a perfect equilibrium of the basic forces and functions of life, when these forces unite in a social compound.

We began our inquiry into the direction of kinetic social force by the assumption that the conception of wealth, and its uses, would be found to be our most efficient instrument of investigation. And by clinging to that method we have arrived at the conclusion above set forth. Method and instrument would be alike vitiated were it possible to bring forward a single social fact which would prove to be contradic-

tory to the hypothesis. But we think that a more detailed examination into the nature of social motion will serve to restrict the number of spheres in which such contradictory facts may be found; and into that inquiry we may now proceed to enter.

CHAPTER IX

THE LAW OF CAPITALIZATION

IN developing the theory of social life which is offered here for the consideration of thinking men, we have no desire whatever to assume the attitude of a critic. We believe that the critical method is perfectly useless when the thing desired is the demonstration of natural knowledge.

Criticism is useful enough for the destruction of old errors. Its function consists only in clearing the ground for the construction of safe and demonstrable truths. But no sum of criticism, taken by itself, can ever result in the unfolding of a new law of nature. To make this clear let us consider one conspicuous example. There was once a very respectable theory of planetary motion, originated by Rene Descartes, accounting for the facts of the solar system by assuming the existence of a kind of universal fluid, in which all the planets swam as a light body is buoyed up upon water. This fluid, Descartes held, swirled around the sun, carrying the planets with it in so many *vortices*. The theory was pretty and alluring, and won for itself numerous and distinguished advocates. But it had not been demonstrated, and its author had attempted no proof that it was true.

It is plain, now, that if scientific criticism have any *raison d'être* at all, its function would apply to this theory of Descartes. Let us say that a critic of the Cartesian theory had called attention to the fact that a spherical vortex was mechanically inconceivable and impossible, and we have an ideal illustration of the function of criticism. The vortical theory would have been proven *false*, but the critic would not have replaced it with anything more serviceable.

Newton, seeking to explain the same facts that had engaged the attention of Descartes, proceeded without any regard to the Cartesian principle. He did not criticise existing theories, but sought to account for existing facts by the assumption of a new postulate, and by its subsequent demonstration. His method was purely constructive, and with his demonstration all other theories of planetary motion fell to pieces.

We have touched upon these somewhat remote matters to illustrate our own position in the grounds of social science. Therefore it does not become us here to offer any criticism of the methods of political science beyond stating the fact that political science, in keeping too narrowly within its self-set boundaries, has failed in a thorough understanding of its own subject-matter. Writers who have studied the science of government have left the science of economics alone, and in doing so have thwarted their own purposes. So far as the author of this book is aware, the only writer who has made a philosophical attempt to understand the true relations of government to capital is John B. Clark, the distinguished American economist. Professor Clark has

gone farther than most of his kind in his conceptions of the part played by government in the production of wealth. To assert that the monarch, the executive, the legislator, the judge, the soldier, are, indirectly, it may be explained, actively engaged in the business of creating wealth is, it would seem to us, to assert a self-evident truth, needing no demonstration of any kind.

Yet, be it said, some of Professor Clark's critics — economists themselves, by the way — do not seem to be able to comprehend the force of his suggestion. That fact is probably due to their fear that by enlarging the conceptions of their own science they might trench upon their friends, the political scientists, and rob them of some of their hard-earned glory. Yet we fail to see why any considerations of this kind should deter economists from taking their proper place as expositors of social theory. If the existence of government is dependent upon the facts with which the science of political economy has to do, we see no reason why those who are studying the one order of things should ignore the existence of the other. On the contrary, we do not see how the two orders can be considered apart. The truth is that questions of government are forcing themselves on the minds of political economists. The two sciences are rapidly becoming involved, one with the other, as it is discovered slowly that the two orders of facts are inseparably bound together and have been so from the beginning.

When, in the preceding chapter, we stated that the function of government is essentially capitalistic, we had no more in view than the truths we have just

hinted at. But much remains to be said. The inquiry will carry us far beyond the suggestion of Professor Clark, and will enable us to understand upon what social foundations his profound suggestion rests.

We have said, in effect, that political power springs from the possession of capital. To live and to propagate, men must secure wealth in some way. In a group residing upon a fixed locality, the prime necessity is the production of things needed for the sustenance of life; and the secondary necessity is the division of the things among those who create them. In the doing of this, law and order arise among men, and out of law and order emerges the face of government, by which law and order are strengthened and preserved.

But who and what are those in whom inheres the *power* of governing? What is political power? How does it come to be associated with certain individuals, certain classes of individuals, and certain groups of these classes? What are the conditions of its existence, and what are the laws by which it passes from one man to another, from one class of men to another class, from one system of government to another system, through the flux of political history from age to age?

Let us ask another question, the answer to which will give us the key to the queries set forth above. How do men acquire political power? To answer this question we must go back to the beginnings of organized society. The brute man of long ago is at best an ugly being in his desires and his mode of satisfying them. Yet we are perforce required to

admit that the brute man himself is our ancestor, and that his institutions are our institutions, vastly altered in character, it is true, yet just as truly built upon the old foundations.

Brute strength, in a savage community, is the indisputable basis of sovereignty. The strong man becomes the ruler. Now, what does the strong man take to himself? Of a surety he takes to himself the things which give ease and comfort to their possessors. But what are these things? In a savage state they are the crude products of crude labor. In more civilized groups, they are the more refined products of a labor that is skilled. In a rapidly growing group, they are the products of labor, the land itself, and the bodies of living men who are used as instruments for the creation of wealth — *slaves*.

The individuals who have acquired these things by brute strength will remain the rulers of the group as long as possession is insured. But it should be manifest that he who can safeguard himself in the possession of the things used in the creation of wealth will, by the very fact of possession, dominate the conduct of those whose lives depend upon the new wealth created. Power which can be exercised over the lives of others, as well as over their conduct; and power which can enforce the will of those who possess it upon the wills of the remaining members of the group, is *political* power if that term has any meaning whatsoever.

But power of this kind can take no form so full of force, so mighty and so manifold in its possible applications, as the form it assumes when the possessor of it owns the very instruments upon the use of which

the life of every individual depends. *Capital* is only another name for these instruments. And the individuals who control capital—control it absolutely and practically—are the only individuals upon whom the power of sovereignty rests. The conclusion is sweeping. Given to one man, or to many men, the absolute and free control of all the capital in any group, and these individuals are the rulers of the group, free to create any instrument of force they please, and to impose their wills upon the conduct of all the others. This, then, is political power; and we have just seen how it originates.

Now let us suppose that this possession of capital is not a rigid condition; that capital is capable of being shifted about from one man to another; that the individual who has capital to-day may be without it to-morrow. Let us suppose, rather, that capital has a tendency to flow down from the possession of those who rule into the possession of those who are ruled. What would follow? Let us first inquire how this *diffusion* of capital could be brought about.

Chief among the kinds of wealth which place power in the hands of the rulers will be that thing which is used as money. The larger the quantity of money possessed by the rulers, the stronger will be their ruling power, for by money they can secure and enlarge the instruments of force whereby they coerce the remaining members of the community. But, as we have seen, money is the most desirable form of capital in all but the most advanced present-day civilizations. The rulers of a community, then, are those who possess the capital of the community; and of this capital, money is the principal instru-

ment. But most of the money of a community will always be in the hands of the men who own the real creative capital; or, at least, the money will flow in a steady stream through the hands of these capitalists into those of the laborer, and back again into the hands of the capitalists. But in the hands of the laborer, money is no longer productive of political power, for the reason that labor uses all but a small part of the money it receives for consumption purposes. Laborers, however, who save out a part of their money for future capital, become politically powerful as soon as the saved-up money is converted into actual instruments of creation. Thus it would seem clear that the political power of a people is really their capital.

If this be true, — and we do not see how it can be questioned, — then we can state at least one term of our desired law as follows: —

The diffusion of political power is proportional to the diffusion of capital.

This is a theorem the demonstration of which, we believe, has been given in the preceding paragraphs. But true as this law may be, it is not complete, and it does not satisfy the requirements of a synthesis of social forces. For there is yet left out of account a most important element of social progress, and that is the *quantity* of the wealth used and in process of creation by any political group we may desire to consider. What is the relation of political power to the *quantity* of wealth possessed by the society?

The relation here will be found, upon examination, to be more complex than is the diffusion-relation of capital and political power. We believe that the

variation in political power and in the quantity of wealth will be found to be of an inverse order. But an important distinction must not be forgotten here. It is that between *capital* and *wealth*. The diffusion of wealth multiplies the number of those who are powerful politically, and why? Because it enables increasingly large numbers of men to become capitalists. But if diffusion of wealth is accompanied by diffusion of political power, it will be seen that the *quantity* of wealth will have an important bearing on the form of the government if the diffusion grows as the quantity grows; or, to state the proposition in more general terms, if the *diffusion and quantity are proportional to each other*. Now this latter law is precisely the truth in all progressive societies. But we will not consider this fact at present. We desire to establish, first, the effect of the quantity of wealth upon the relations which exist between the rulers and the capital of the society. Any particular type of society will do for illustration, for the law must be found to apply to all conceivable societies in which capital exists—and this whether the society be human or not.

Let us take for example a feudal state. The capital there—and by capital in a feudal state we mean land and agricultural instruments—is in the hands of the lords. Now it is evident that product grows faster than capital. And if we suppose that by means of excellent crops, increased labor efficiency, and improvements in methods of agriculture, the general product of such a society is largely increased, it is plain that the sum of the capital in existence will be smaller as compared with the total wealth than

it was before. Therefore, as the quantity of *wealth* — not capital, be it remembered, but all kinds of wealth, capital included — increases, the sum of capital itself grows comparatively less. This is a self-evident truth needing no more demonstration than the statement of it. And if it be true of a feudal society, it *must* be true of *all* societies in which capital exists. Now as capital power is the equivalent of political power, it is plain from the above that as the quantity of general wealth increases, the quantity of capital in the hands of the rulers grows comparatively small. Of course it does not grow absolutely small. It grows absolutely large. But compared with the quantity of wealth in general, the quantity of capital is smaller. We may therefore state the second term of our generalization as follows :—

The quantity of capital grows relatively smaller as the absolute quantity of wealth increases.

We are now approaching a formula in which may be expressed those very complex relations between the diffusion and the quantity of wealth, the quantity of capital, and the method of the government. Before stating the formula, however, it will be necessary to introduce it with a few words of definition. We have thought it best to set out these definitions in numbered paragraphs in order that the reader may turn to them when he is following us in the reasoning we will use in the deduction which is to come :—

1. Wealth is the appropriated and exchangeable part of a social environment.
2. Capital is that part of wealth used in the process of making new wealth, or in the circulation of product.

3. Political power is the ability of certain members of a society physically to force the remaining members to do their will.
4. Government is the sum of the force usable by the rulers and applied to the governed by the instrument of force created for the purpose.

With these definitions in mind we can now formulate the law of social progress in the following terms:—

Government unites with capital over areas which vary inversely as to the quantity of wealth and proportionally as to its diffusion.

For this generalization we can suggest no better term than the law of capitalization. The terms used in our formula are as little fanciful as any we can ourselves conceive. It may be truly said, without rhetorical conceit, that government actually *unites* with capital when government assumes the proper function of capital; that is, when government itself creates and sells the products of industry. There is positive union between a man's body, his raiment, and the things he uses in his daily life. And property right to things remote from his person is potential union or unity.

A learned and sympathetic critic who is familiar with the contents of this volume has suggested that the law of capitalization here formulated might be made the subject of a mathematical demonstration. The suggestion was not new to the author. He had carefully considered the possibility of mathematical demonstration and was compelled, upon reflection, to abandon it. The formula is so suggestive as to be alluring to the mathematical mind. But the element

of exact quantity is entirely lacking, and any attempt at mathematical demonstration could be no more than a pleasing conceit, much the same as the mathematics used by biologists to demonstrate the law of natural selection. These biologists demonstrate nothing. We do not look to them but to Darwin for the proof of his law. Newton's quantities were something very different from those of Darwin and from our own. Quantities of social force, like quantities of vital force, may be reducible to mathematical formulæ, but such formulæ must be based upon methods of measurement which do not now exist. The opinion of the author may be worth nothing in this respect. But until he can see his way clear to a method by which nervous force can be rigidly measured as we now measure the weight of material bodies; and until he is brought to see that social motion can be calculated as we calculate the translation of bodies through space, he must perforce be content with the method of Darwin, whose law, while very clear and highly susceptible of proof, requires no mathematical method of exposition.

One word more is needed before proceeding with our deduction. The substance of a government may be changed without a change in its form. Thus if the capital in a feudal state be taken from the lords and evenly divided among all the people, the form of government will not have been essentially changed. The number of the rulers will have increased, but that is all. The lords were very nearly equal, at least in political potentiality, if not in actual power, and the serf was only a part of the capital which the lords controlled. The same is true of a slave-system.

Greece was a democracy, and if Greece had liberated its slaves and enfranchised them, it would still have been a democracy, but a democracy without slaves. When feudal power is merged into a monarchy, the power of the lords is curtailed by the power of the crown; and when the power of the crown is curtailed by the people, the power of the lords is curtailed with it. But monarchy is only a step from feudalism toward democracy, and in all modern progressive groups living under monarchy, the crown is the symbol of the people.

If we now seek to apply this law of capitalization to the facts observed everywhere in social progress and decay, we shall find these facts readily taking their places in the sequences implied in the terms of the generalization. When we speak of government "uniting with capital," or "extending to capital," we mean simply that the persons making up the mechanism of government exercise right of ownership by actually *using* the capital, or by controlling the actions of others who use it. When we speak of "areas" of capital, we mean those quantities of capital which are the objects of this right to exclusive use or control.

It will be observed that in all communities capital is in the possession of the persons who rule the realm. This is true either practically or theoretically. In a feudal state the lords own the wealth, and, in a way, the persons of the producers. In states in which slavery is practised, the governing classes actually own the bodies of the governed. When feudal power unites in a royal or imperial power, unlimited by constitution, the monarch owns, theoretically at least, the entire wealth and the persons of the community.

Let us inquire, with these facts in mind, how capital and government act when considered in the light of the first equation of the law of capitalization — that is, that government unites with capital over areas which vary *inversely* as to the quantity of wealth.

To do this we will imagine a state in which the ruling power remains fixed to a specific number or class of individuals, while the quantity of wealth is variable. That is to say, a community in which government is unchanging while the total quantity of wealth increases or diminishes. In such community, as in all others, capital, being the most desirable form of wealth, would be largely in the possession, or under the control, of the ruling class. Now if the quantity of wealth were supposed to decrease, it is manifest that the area of capital over which the ruling class, or government, would have control, would be larger, in comparison with the total sum of capital, than it was before the decrease came about. If the decrease of wealth were progressive, we can imagine that the time would come when all the capital would be in the possession of the government, and there would be no private capitalists whatever.

This condition of things is very closely approached in a feudal state, in which capital, being almost exclusively composed of land and agricultural implements, is owned exclusively, or nearly so, by the lords. The rights of the lords would lie in the land, and as the lords are the government, and the land is the capital, the government would be united with capital over its entire area, or nearly so. This area, it is clear, would be conterminous with all but an insignificant part of the capital in existence.

If we now conceive that the quantity of wealth be increased, we will find that the areas of capital over which government extends will contract as compared with the entire quantity of capital, although the quantity over which the government extends be very much enlarged, absolutely. That is to say, government capital may actually increase, but its area, as compared with that of the total capital, will be diminished as the quantity of wealth would grow. For the landowners, who are the rulers, would find that their wealth would be increased by the free use of capital *other than land, by others than landowners*. They would find that as capital, other than their own, increased in quantity, their own capital, which would be land, would *rise in value*. This would be true because land would be most highly useful as an instrument for the creation of new wealth. But as every new addition to the quantity of wealth would imply larger quantities of wealth for the landowner, it is clear that it would be to the interest of the landowner to facilitate the widest possible liberty for capital in other forms.

But as this liberty for the use of capital, other than land, could only result in the progressive increase of wealth of all kinds, it is manifest that the total sum of capital would soon outstrip that of the land. This would result in the diminution of the quantity of capital in the hands of landowners, as compared with the whole quantity of capital in the hands of all. And as wealth would increase in quantity, the value of land would constantly diminish, when that value would be compared with the value of the *whole* quantity of capital; while, at the same time, the *absolute*

value of land would constantly rise to higher and higher levels.

So it is seen that, so long as government remains fixed, the areas of capital over which government extends contract with expanding wealth and expand with diminishing wealth. But while all this is perfectly true, *in theory*, we never find this state of things actually existing in any human society. Why? Because, in fact, government, in human societies, never remains fixed, and can never remain fixed, so long as it is possible to disturb it by the force described in the other equation of the law of capitalization; namely, the progressive diffusion, or the reverse, of the entire quantity of wealth.

The law of capitalization is seen best exemplified when we take it in its entirety, and of course the reader will quickly understand that this is the only way in which we can rationally and usefully consider it and test it. We will regard it as a *completed* process in another place. At present it will be useful to observe it at work in human societies in general. That is, we will consider the facts as they actually exist.

In all progressive societies the quantity of wealth constantly increases, while the diffusion of wealth constantly rises to higher degrees of expansion. This process is, in a word, social progress. We should, therefore, expect to find that in progressive groups the areas of capital over which government extends are ever expanding to accommodate themselves to the progressive increase of the quantity of wealth. We should find, in the richest communities, that government use or control unites with the largest areas of capital, either actually or potentially. But we should remem-

ber, too, that the extent of these surfaces of capital is determined, not alone by the *quantity* of wealth, but by its *diffusion*. So, we should expect to find that some societies, while very much richer than others, absolutely, are less strongly characterized by areas of government capital, owing to the fact that in these richer societies the diffusion of wealth is lower in degree than in the poorer ones. We might thus be enabled to understand the fact that in England government unites with capital over smaller areas than in New Zealand, where the absolute quantity of wealth is considerably less. But if England be wealthier than its colony, its wealth is less generally diffused. And if we find that, in New Zealand, government unites with capital in areas larger than in any other of the democratic groups of the civilized world, it would seem to be because in that island the average citizen is comparatively richer than in any other society among men.

The causes which produce this peculiar readjustment of government to capital we have discussed in the chapters which have been written thus far. We desire in this chapter especially to discuss the rapid development of capitalization as it is found in the United States. We have selected the United States, first, because it is the wealthiest social group in the world ; secondly, because of the peculiar character of its capital ; and, thirdly, because there is a promise that the United States will quickly develop areas of government capital of comparatively larger extent than those of New Zealand, or its wealthier neighbor, Australia.

The profusion and variety of the wealth of the United States are inviting objects of inquiry, while

the political state of the country is one which offers free play to all the forces which interact between government and capital. The community is perfectly isolated from all external influence. It is not only dissociated from all over-government, such as is incidental to colonies, but it has no alliances with foreign nations to disturb its industrial progress by the element of military needs. Its contiguous environment has little effect upon its political growth. Since the abolition of slavery, the country has been free to develop its capital under a form of government which gives to every individual citizen an equal quantity of political power and a potential equality of thrift.

How very effective has been that potentiality of political equality will be seen exemplified when we remember that Abraham Lincoln, a president greater in every respect than the so-called "father of his country," was born of parents at the lowest end of the scale among the whites, and that he was entirely self-educated. Of the eight presidents who succeeded him, all but two were of lowly origin. One had been a tailor, another the son of an obscure merchant, another had been a farm hand, another a county sheriff. Of the presidents who preceded Lincoln one was the son of an Irish immigrant, a second had been a farm laborer, a third a wool-carder, and a fourth was the son of a poor farmer.

The potential economic equality of the citizens of the United States has been a matter of proverb among civilized people ever since the foundation of the republic. The uncultured American millionaire and his wealth, while a pleasant instrument for the indulgence of European satire, is, at the same time, a con-

spicuous example of the potential economic equality which has characterized citizens of every class in the United States. It is in such community as this that we should seek that development of capital most useful to our present inquiry. It will be observed that within the past half century the economic life of the United States has changed very rapidly, much more rapidly than that of other countries. It has developed a steam-power out of all proportion with its population as compared with similar development in other communities. It has abolished an extensive system of slave-labor which was out of harmony with economic progress. And it has produced a moral sense among the mass of people which, as we have seen, is unique and paradoxical.

But while this is true, it is none the less true that corresponding changes in government have taken place with an equal and resultant rapidity. Those who believe that the written Constitution of the United States is the organic law of the land are suffering under a political delusion of a remarkable complexity. The written Constitution has never been the organic law since the moment of its adoption. The real organic law is the moral sense of the people, more or less adequately and tardily defined by the enactments of legislatures. The decisions and the interpretations of the so-called Supreme Court have nothing whatever to do with the shifting moral standard of the people or with the action which issues out of moral ideas. The Constitution, as interpreted by the Supreme Court, held that slavery was just. But the majority of the people abolished the Constitution and the Supreme Court, too, for four years, while the real organic law was in effect and in force.

It would need no decision of the Supreme Court to teach the people of the United States that trial without jury is unconstitutional. Yet trial without jury, and condemnation to death and execution without trial, are common practices in the United States, and are morally approved by the majority. If the Constitution were the supreme law, and not a mere political superstition, it would be enforced in all respects by the will of the majority. But the majority do not know even the principal articles of the Constitution, yet they seem to understand quite thoroughly when their political or economic rights, — as conceived by them, — whether constitutional or not, are restrained. If there be any act of an individual which the Constitution leaves him perfectly free to do, it would appear to be an act by which he unites his capital with that of another for purposes of economy. Yet the *real* organic law forbids this act, and it is also forbidden, with absurdly superstitious limitations, by the national legislature.

In the United States it is a crime to coalesce capital *for the purpose of advance in prices*. As if any judge, jury, or legislator could determine, by any conceivable method, whether this is the purpose of coalition or not! The Supreme Court might decide, by the toss of a coin, whether or not this law were constitutional, and the decision would have the same effect upon public opinion as if that decision were made after severe and prolonged contemplation, as in the case of its decision, for example, that a black man had no rights which the Constitution required a white man to respect.

It will thus be observed that the government of

the United States has changed materially and is now changing more rapidly than ever before. All ideas whereby it is conceived that the government is fixed are mere superstitions, arising from false perceptions of the true relations of government to wealth. With these facts in mind, we can rationally proceed with our inquiry as to the co-progressive action of capitalization and government in that most interesting group of which we have been writing.

For the sake of convenience in the argument, we can suppose that there are two kinds of growth—simple and compound. Of course, we mean relative simplicity, and relative complexity. We can suppose that the growth of a cell is of the simple kind. That is, the cell draws into itself, and incorporates into its structure, external material which, after assimilation, is very little different from its former state. If we now suppose that the cells unite in the formation of another and a larger structure, let us say a human heart, we can suppose that this is compound growth. If we further suppose that the cells unite in the formation of numerous such structures, until the complicated mechanism called a man is produced, we can say that this new arrangement is a growth of a more highly compound kind. These characters of the simple and the compound are observed in all social growths as in all vital growths. The degree of the complexity of the compound structure is determined by the complexity of the environment. This truth we have discussed fully elsewhere, and we need not repeat the discussion here. But it is our purpose at present to apply the principle to the

growth of capital as that process is observed in the United States of America.

In primitive societies capital consists chiefly of land and of the tools used for its cultivation. The simplest kind of capital would consist of a hoe, seeds, the animals used for propagation, and the land itself. The capital would take on a compound growth when the hoe would become a plough, and when some of the animals would be used to draw it. The compounding process would be increased when the animals would be used as money, for the conversion of one kind of wealth into another, and for the valuation of all kinds of wealth. As the environment would grow in complexity, new and more efficient forms of money would be discovered, and the compounding of capital would be correspondingly intricate. It will be remembered that the only functions of capital are the production and division of wealth. We would, therefore, see a compound effect following upon a compound cause. As the character of capital became compounded into higher and higher degrees of complexity, the character of the method of production and distribution would undergo a similar transformation. This, it would appear, is a necessary truth.

But in a complex like a progressing human society there would be numerous and ever multiplying instruments of capital which would interact upon each other in a manner so as to further facilitate this very process of compounding. Every fresh discovery of new relations to the environment would cause a change in the method of capitalization, production, and distribution. The force which would necessitate these changes would be the desires of

men, generally, for increase of possessions. And the compound result of this conflict would be a progressive action toward an equality of diffusion of wealth. Every new discovery would be "fortuitous" or "accidental," as far as these words have any meaning whatever. The truth as to social progress is quite simple. Communities in which certain individuals discover new methods or new instruments of capitalization are progressive ones. Those in which such discoveries are not made are backward ones. There is no mysterious law of progress, no directing power which selects some communities for survival, some for elimination, and some for a stationary existence. There is no evidence whatever for such belief. On the contrary there is every evidence, in fact, that progress depends upon the perceptions of new causal relations between the things used for the production and diffusion of wealth.

There is necessity, too, by which these new perceptions or discoveries must at once become social as soon as they are made. It will be clear that few men will keep an invention to themselves, when its use can benefit the inventor only when he shares his knowledge with others. Thus every new invention must, of necessity, become the immediate property of all. We can imagine a man making a discovery and allowing it to die with him. But that kind of a discovery is not a social one, and hence is not an element of social progress.

It will not be a matter for controversy when we say that the sum of useful discoveries with relation to capital has been larger in America than in any other country. We should, therefore, expect to find

that, in America, the character of capitalization is more highly compound than in any other country. And such, it will be admitted, is the fact. If this be true, it should follow, upon our premises, that the character of production and distribution is compounded, in America, to a correspondingly high degree. An objection to this conclusion may be urged. If complex capitalization and production are followed by a correspondingly even division of wealth, we should look for a more complex kind of capital in New Zealand than in America. But this objection would seem to be answered when we consider that the moral ideas of that community are the product of the development of capital in Europe. In other words, the moral characters of the people of New Zealand are characters *derived* from the European group of which it is the offspring. These characters were carried over in a developing state from England, and when left alone in an environment comparatively free from pressure of population, developed more freely and rapidly in New Zealand, even with a less complex environment than that which was left behind.

Thus the moral force which causes progressive diffusion of wealth in a new and comparatively simple society, may be really due to the more complex character of the method of capitalization which has been left behind in an older society. To make this clear, we will suppose that a dozen men of different social rank, reared in London, be removed, let us say, to an island remote from civilization. They would carry with them the moral ideas normal to London. Their complex relations in the matter of social rank would

not be the product of the environment upon the island. They would be the product of the social state of England and its entire historical development. But is it not manifest that these moral ideas would be subject to the disturbing force of the new environment? Would not common necessity, and common freedom, tend to break down the ideas of caste carried over, and bring about a social code by which rank would be levelled? Would not the rank of the superior ones fall, and that of the inferior ones rise toward a mean at which the rank of all would be much more nearly equal than in England? Would not this process be simply an acceleration, upon a small scale, of the process of levelling that had been going forward upon a large scale in the home country? And would not this acceleration be induced, not by the sudden increase in the complexity of the environment, but by a sudden simplification of the environment while the moral ideas still remained in force?

This example illustrates the forces at work in New Zealand, which have produced a state in which there is comparatively high diffusion of wealth, accompanied by comparative simplicity of capital and of the method of capitalization. It is *moral* force which produces the democracy of wealth found in New Zealand. We shall not enter here into a discussion of the point as to whether that moral force is expended in a method which best serves the economic life of the people, and best facilitates the flow of social forces to their necessary equilibrium. If it be admitted that the force at work in New Zealand is a *moral* one, that will be enough for the present needs of our discus-

sion. We do not desire, at all, to examine into questions of what *ought* to be. Our sole desire is to ascertain the nature of the fact as it *is*.

The politico-moral code of the United States was produced very much in the same way as would be that of the twelve men we have fancied in an island remote from European influences. But it should not be forgotten that the *economic* environment of the United States, at the time of its birth as an independent group, was not very different from that of England, so far as instruments of capitalization are concerned. If anything, England was in advance of the United States in many ways. In the latter country, slavery in its most efficient form, still weighted down the life of a large part of the nation. But this deterrent force need not be considered, because the United States really consisted of *two* groups, one of which was far more moral in every way than the other, and in every way more progressive. And this is as perfectly true at the present time as it was before the war of emancipation.

When we speak of the United States, we mean that powerful, populous, industrious, highly intelligent and highly moral community north of the ancient dividing line between the slave states and the free states. It is this community, and not that south of the ancient line, which has developed capital and its new methods. The southern people, with their institutions of chivalry, their extravagancies of manner in their treatment of women, their antique courtesies, their lofty ideals of family association and descent, their fine sensibilities of personal honor, their rigid conceptions of caste, and the notable lack

of scientific knowledge which distinguishes them from their northern neighbors, are a political and economic relic of an old régime which is found to be an encumbrance to the free movement of the enlightened, modern, and free community which is properly and historically the United States of America.

But if the development of capital in England produced the politico-moral code of the new polity, the economic development of the United States was freer and faster than that of the older country in which the population was proportionately large. The new community could find better and larger uses for inventions discovered in Europe, because the new environment was infinitely more elastic than the old, and, in many ways, had yet to be built. Not only was this true, but the absolute number of American inventions for use as capital was, and is, much larger than that of any community in Europe. Discoveries of this kind were made in the United States which were not made elsewhere. This simple fact accounts for the very rapid rearrangement of the method and its use found in the United States. It is natural that we should look for this development of capitalization in a community with a more complex character of capital rather than in one with a less complex character.

To reduce this abstract statement to a concrete example, let us look at the possibilities of capitalization in two countries rather widely separated in this respect, say England and Russia. The former has been a distinctively manufacturing community, and the latter a distinctively agricultural one. The variety of capital in England has been very much greater, therefore, than in Russia. The one has had

a very complicated system of production, the other a very simple one. The purely financial instruments of capitalization will always be found to take their character from that of the actual instruments used in the creation of wealth. Thus if production is carried on in factories, in which are assembled many men and many machines, we should find a banking system arising because of the desires of wage-earners to deposit their future capital in a safe place. But this system would soon give rise to new functions of banking not associated with deposit functions. And as these new functions would necessitate the devise-ment of new forms of money, or its equivalent, we should see capital coalescing in funds jointly owned by several persons. Once that the advantages of the joint stock company became apparent, the joint stock idea would become organic in such society, and would tend to displace the old system of individual ownership and of individual superintendence of production.

This is the process which has actually gone forward in England. But it should be clear that if England had made no mechanical discoveries, which facilitated the rapid growth of the factory system, these new possibilities of capitalization could never have been perceived. Indeed, to hold such contention would be the equivalent of holding that a relation can be perceived between two things one of which is non-existent; and this is manifestly absurd.

If, now, the method of capitalization in England is far more complex than in Russia, and only because of the higher complexity of its capital, it should be clear that the same logic is applicable when we compare the method of capitalization in England with that

observed in the United States. We can easily imagine how England might never have progressed, financially, even after the discovery of the factory system. We can imagine that nobody in England had ever heard of a bank using its deposits; that future capitalists had simply placed their money in banks, paid for its custody, and drew it out when desired; that bankers had been content with this function, and that the idea of lending money for productive purposes had never been applied to capital in machinery. But all of this is the reverse of truth. Some one *did* actually conceive the idea of a joint stock company, and conceived it by simply noting a new possible relation between capital, in its symbolic form, and capital in its creative form.

A similar process of thought has taken place in the United States. Somebody perceived that it was possible to compound existing documentary capital into a more complex form, and that this new form would greatly facilitate the purpose of investment. That purpose, as everybody knows, is the acquisition, by individuals, of the largest possible quantity of wealth in the smallest possible time. That this process has taken place is a self-evident truth. The new system of capitalization is here, and it came about in the way described and in no other. In fact, there is no other way in which it *could* come about. It was first produced in the United States because the new discovery was first made in that country. It may have been made by one individual, or by several at different times, or by several simultaneously. But once having been made, it must at once have become organic. It is hardly needful to go into the details of this new

and highly compounded method of investment, for it is a fact so very conspicuous that it has become the principal political question in the United States. The people, in the mass, know quite well what is the nature of the new companies of capitalists erroneously designated by the term "trusts" — a term invented by the inventors of the method. The details of the method vary with different species of the genus, but the principle is alike in all.

The social forces which lay at the root of the discovery were precisely the same as those which brought about the association of wage-earners in labor unions. It was natural that the labor-union idea should be older than that of similar associations of capitalists. Labor and capital are only different aspects of one and the same process — production and distribution of wealth. But the desires of wage-earners for larger shares of wealth are more pressing than those of capitalists and for reasons that are obvious. Therefore, we should find that natural selection would act first in that part of the process whereat the forces converged most powerfully. Labor-unionism and the "trust" method of capitalization have no *causal* relations whatever. They are two distinct phenomena of distribution produced, independently of each other, by natural selection. We can imagine labor-unionism progressing without any corresponding progression in capitalization, and *vice versa*. But we cannot imagine that either would be produced or developed, save by the discovery that association was a highly efficient instrument for rapidly increasing the shares of wealth flowing back to wage-earners, on the one hand, and to capitalists on the other.

The very efficiency of the new system of capitalization would cause it at once to be approved and condemned by a very large and a very small class of persons in the beginning of its operation. But here we must observe a very significant difference in moral ideas as applied to the so-called trusts and to labor unions. Labor unions, at first, were *approved* only by the very small number of persons whom they directly benefited. Then they were approved by progressively large numbers. Then by many of those who at first conceived them to be hurtful. And lastly by the government.

The "trust" method of capitalization was at first *condemned* only by the comparatively small number of capitalists by whom the method was conceived to be hurtful. Then it was condemned by growingly large numbers, not themselves concerned with capitalization. Then it was condemned by large independent capitalists who had been the first to approve it. And lastly, it was condemned by the government. We observe here a reverse action in moral forces. Methods of association which are perceived to facilitate the acquisition of wealth by the many are progressively approved. Methods which are perceived to facilitate the acquisitions of wealth by the few are progressively condemned.

But it must be observed that they are not condemned because the many are surrendering larger and larger shares of wealth. For we know that the distribution of wealth has been, and is, progressively diffusive. The growth of labor-unionism alone would prove this to be the truth. Why, then, this progressive condemnation of this new method, which has been

found to be so highly efficient an instrument for the satisfaction of the desires of capitalists?

We should look to the labor unions for an answer. So long as there exists among laborers a *potential equality* in the acquisition of wealth, association would be condemned. When association limits the power of the individual to rise to greater possessions, the idea of association must ever be accompanied by ideas of pain. On the other hand, so long as there exists in a society a potential equality among capitalists of all kinds, association among capitalists will be approved. But when that association is perceived to contract the potential equality to progressively small numbers of capitalists, and to smaller areas of capital, such association will be condemned. It will be condemned not only by those capitalists who are unable to use the method, but by that very much larger number of men who are not capitalists at all. For potential equality in the use of capital is far more desirable to wage-earners than to capitalists themselves. The wage-earner can, with this equality in his possession, always hope to transform his saved wages into the most desirable form of wealth; whereas without this equality he can never hope to do so.

We can thus apprehend the reason why the compounding of capital on a very large scale is condemned by all but the compounders. It is condemned, not because it is conceived to *diminish* the possessions of the many, but because it is conceived to prevent the rapid *increase* of the wealth of the many, or the potentiality of such increase. The new system of capitalization is not reprobated by those who use it,

but by those who conceive that its use by some, or by a few, limits the possibility of its use by all.

Such moral ideas as these, with regard to capital, will not be found in communities wherein wealth is diffused in low degree. It is possible that they may exist in a few minds which partially perceive the true relations of government to capital. But these minds are those of individuals who have possessed wealth, or have used the wealth of others, in comparatively large quantities. The ideas of these individuals never become organic in the societies surrounding them, and government progresses slowly in its expansion or contraction over areas of capital, which adjust themselves to the quantity and diffusion of a community's wealth. It is difficult to imagine a person, born and reared in slavery, suddenly acquiring moral ideas to which his state of bondage is highly repugnant. But if the slave be supposed to have acquired a considerable fortune of his own by easy stages, we can imagine him passing from the bond to the free state without any sensible convulsion of feeling. His moral ideas would be in equilibrium with his possessions, and his capacity for the use of wealth adjusted to the quantity of wealth of which he was master. But, while he was accumulating his fortune, any interference with this process would be condemned by him as wrong; and once having secured his liberty, he would use every means in his power to enforce his moral conviction that liberty, for him, was right.

A process very similar to this has gone forward in the United States with concern to capitalization. The individual citizen has possessed increasingly efficient

means of acquiring wealth. His potentiality for the possession of unlimited quantities of things has been very high. This truth is seen in the fact that the immensely wealthy men in America, with a few exceptions, have risen to their possessions from comparative poverty, and in a very short time. But the new method of capitalization is conceived to interfere with this potentiality, and it is now condemned by all except those who practise it, and they are comparatively few. We should therefore expect that the many, who conceive their liberties restricted, should use the most powerful means at hand to remove the disability imposed upon them by others. The only means available is government, and hence we find that government is uniting with capital in the United States over areas which are proportional to the diffusion of wealth. This action is made easy and natural by the fact that political power is measured by the diffusive character of the wealth possessed by a society.

In America, the majority are the rulers. Most of the wealth of the community is in the hands of the majority. The majority, therefore, have used their power to compel the minority to refrain from acts which are conceived by the majority to be wrong, although conceived by the minority to be right. In doing this the functions of government have been applied to areas of capital which were before free from contact of this kind. Government has simply extended its control over things which, before, were outside the interference of its power. These things are the instruments used by capitalists for the creation of wealth and its division among men. The idea

of government control, once having been conceived, rapidly became organic, and is now approved by the moral sense of the community. But the process, like all other forms of growth, is a progressive one. The very nature of the forces at work necessitates progressive action. The action cannot stop with mere government *supervision* of capitalists. This is true because the purpose of the control is not militant, as in supervision of industry for revenue, — like that of the distilling trade, — but industrial.

We cannot conceive the action of government stopping at mere supervision while the progress of private capitalization goes on. The relation between the two processes is a causative one, and both must progress together. If mere government supervision be found in no wise to affect the method of private capitalization, action by the government which shall be *more* than supervisory must be taken. There is no other alternative. If government contact with capitalization stops at mere supervision, and the supervision in no wise limits the process of private capitalization, the latter, it is clear, must go forward. But this would be equivalent to saying that economic progress is in advance of moral progress, or that the possessions of men exceed their capacities for use. And this conclusion, it is manifest, is absurd. For a man thinks it is right that he should have more wealth because the wealth he possesses capacitates him for use of still larger possessions. The moral force which has caused government supervision of capitalization can find no outlet in action which stops with bare supervision. To find an outlet it must secure action which will do the very thing supervision fails to do.

In what, now, can this action be found to consist? Is it not clear that it can consist only in the actual use of wealth or of capital by government itself? If we should find government passing from mere supervision to the *management* of private capital, to the regulation of wages and of prices, would not this action be only an enlargement of the areas of capital in contact with government? And would not this contact be approved by the many whom it would benefit? The most generally desired occupation among wage-earners is that of service under government, because, other things being equal, government pays higher wages than do private capitalists. But the number of servants used by government is comparatively few. There is hence but a small area of potential equality for persons desiring public employment. But if we conceive the area of public capital to expand, this area of potential equality will be conceived to expand with it. And as this public use of capital would cause a more general diffusion of wealth, the areas with which public function would unite would progressively enlarge. We must accept these conclusions or be forced to contend that economic progress can go on while moral and political ideas are at a standstill. It is impossible to take a middle ground between these two conceptions. That this is true a little reflection will show.

If it be admitted that social forces are flowing backward in the United States, it must be admitted that the principles we have laid down in the first part of this book are untrue. We would have to argue, in support of that contention, that men do not exert themselves for the gratification of their basic desires

of nutrition and propagation; that increased possessions do not enlarge human capacity for the use of wealth; and that moral conceptions do not condemn murder as the highest evil, and approve charity as the highest good. We would have to argue that the sciences of biology, of psychology, and of political economy are mere logomachies — words without any meaning whatever. We would be compelled to admit that money, and the multiplication of mechanical devices, tend to restrict the more equable diffusion of wealth rather than to facilitate it. We would have to admit that political progress has not taken place, and that men are less intellectual, less æsthetic, and less moral to-day than fifty years ago. These things are self-contradictory.

If, on the other hand, it be contended that economic progress can go on while political and moral ideas remain fixed, we must be compelled to admit that moral and political progress have nothing to do with wealth and its uses. This conclusion is quite as absurd as those enumerated in the preceding paragraph. The only other conclusion conceivable is that which conceives economic progress to have reached its limit of action in the United States, and which sees in the new system of capitalization an action of a retrogressive character. To this conception it would seem that the diffusion of wealth in the United States has reached its highest possible degree. Furthermore, that, as the forces at work are not in equilibrium, wealth is in process of progressive centralization. And lastly, as this process seems to be a very rapid one, the time must soon come when all but an insignificant part of the capital of the community will be in the hands of a few individuals.

But this third conclusion is not borne out by the facts. If it were, we should see the government of the United States in the hands of a comparatively small number of very wealthy capitalists. We would not see increasing popular demand for the control of capital by government. We would not see laws in restraint of the liberty of capital upon the statute books of the central government, and upon those of all but a few of the coördinate states into which the nation is divided. We would not see a growing dissatisfaction with the perceived inefficiency of the laws which have been already enacted. And lastly, we should not find a rapidly increasing public sentiment to which extensive private ownership of capital is more highly repugnant than any other idea associated with wealth. But none of these facts could prevail in a retrogressive community. In such community the very reverse of these facts would exist.

For the capitalists in power would not, it is plain, pass laws which would interfere with their own freedom. If the compound capitalists are the real rulers of the United States, it is they who would appoint the persons composing the mechanism of government. It would matter little whether the judiciary and the legislators were formally chosen by the real rulers or not. If, after election, the ruling capitalist could force the judges or the legislators, by no matter what means, to do his will, the substance of his power would be the same. But who will contend that such are the facts? That legislators are sometimes corrupted, that judges are often influenced, and even appointed by the power of very wealthy capitalists, no one will deny. That the purposes of such capital-

ists are sometimes served by complacent judicial and legislative instruments, may be very true.

But when this is done it must be done secretly. Public sentiment revolts against a representative ruler who can so far disregard his trust. The public mind in the United States is more highly suspicious of its public servants than that of any other community in the civilized world. So much so, that American judges and legislators have a reputation for venality of which they are probably, for the most part, undeserving. But even if they are extraordinarily corrupt, they dare not openly accept bribes. All rulers have inefficient and venal officers. But the treason of one, or several, or of many, does not constitute revolution. If political power were passing from the many to the few in the United States, — and these few the compound capitalists, — we could hardly expect to find that public sentiment would point in precisely an opposite direction, and that government and capital would tend to unite over ever enlarging areas.

If there is any political revolution going on in America, it is of a very different kind. It consists in the very action we have described in our definition of the law of capitalization. It is a revolution arising from the progressing moral code of the community. Its motives are found in the common desires of men for larger shares of wealth. Its action is approved by the majority, who to-day condemn as wrong that which yesterday they approved as right. It is a revolution which uses force as its method, and government as the instrument of that force. Its purpose is not the enlargement of the power of private capitalists, but a

restriction of that power over very large areas of capital itself. This is the real revolution that is going forward in America, and, while the forces at its root are in action, the written constitution of the state is set aside as being entirely irrelevant to the issue.

Revolutions are marked by two of four characters. If the form of the government be elastic and its military power weak, the revolution will be slow and peaceful. If the form be rigid and the military power strong, the revolution will be rapid and violent. But when we find, in a state, elasticity of form of government and weak military power existing together with a rapidly progressing economic environment, and a correspondingly powerful head of moral force, the revolution should be both rapid and peaceful. This third character or revolution is now observed in the United States. Its causes are to be found in the progress which capitalization has been making, and in the increasing diffusion of wealth consequent upon the process. As the results of the enlarged method of capitalization are felt in the intimate economic life of the community, it is to these results we must now turn for further demonstration of the law.

We have not neglected to note that the nature of capital bears an intimate relation to the nature of production. With this truth in mind, we can readily perceive that compound capitalization must be followed by compound production. The factory system, which supplanted the old method of production, was more complex than the old method because of the higher complexity of the instruments used. With the rise of banking — as it was especially exemplified in the growth of the government bank of England — the

symbols of capital increased in number and kind, and joint stock companies arose. Production was greatly facilitated by this new method of capitalization; but even the new relations of production caused by the joint stock company were simple as compared with the character of production in the United States, after stock companies had been compounded into "trusts."

Simple production in arts, other than agricultural ones, was found exemplified in the old crafts, or guilds, when the capitalist was himself a tradesman, and when wage-earners were, in their way, capitalists, too, for they owned their tools. But when machinery replaced tools, capital of all kinds passed over from the wage-earner to the master, and the character of production became correspondingly compound. Joint stock companies increased the quality of this new character, for that method tended to unite several branches of industry under one control. Manufacturers found that great saving could be encompassed by creating for themselves increasingly large numbers of the parts of their finished product. With the advent of the "trust" in America, this motion was highly accelerated. So much so, that the tendency became increasingly directed toward *one* end, and that the control of the *raw material*, as far as it was possible to track it back to its source in undeveloped nature.

The tendency would first, of course, be found developing itself along lines of ownership of the material itself, and of the different instruments of production which moulded it into its various preparatory forms. But while this process of acquisition would

be going on, capitalists would find themselves continually hampered by a very essential element of production, namely, transportation. For, as a German economist has pointed out, a commodity is limited in its "form-utility" by its "place-utility"; for example, the value of a pair of shoes will increase as the shoes approach the place at which they are to be delivered to the user. This necessity for transportation would move capitalists to extend their control, or their actual proprietorship, to the arteries of transportation. The owners of railroads would meanwhile have seen the advantages of the new methods of capitalization, and thus the means of transportation, being controlled by a plastic and highly centralized mechanism of ownership, would be ready for easier coalition with the creative capital in use.

It would have been found that, as the few objecting capitalists had been induced to yield to the superior forces at work in the process of compounding, the number of allied industries ready to coalesce would be increasingly large. For it is manifest that the new method would rapidly become organic and would affect all industries alike. The only limitation would be to those industries to which coalition would be seen to be positively hurtful. But in all industries in which association increased profits, association would be practised. Natural selection would eliminate companies of capitalists which resisted the growing method. Thus it is that we behold the character of production becoming more highly compound with the progressive compounding of capital.

Let us inquire into the relations of government and capital with these facts in mind. In what manner

would the law of capitalization be seen to act in these circumstances?

Let us suppose, for example, that the process of combination we have been describing tends, as is contended by many, to centralize capital in a very few hands. For theoretical purposes, let us further suppose that while this process is going on, the quantity of wealth in a community remains *fixed*, and also that the government remains unchanged. In the United States the ruling class is the majority of all the people. Is it not clear, then, that with this accumulation of capital in fewer and fewer hands, government would withdraw from progressively large areas of capital? Is it not clear that the majority — and these are the government — would have less and less control of capital as the process of accumulation by the few proceeded? We must remember that the quantity of capital thus withdrawn from the rulers must be compared with the total wealth of the community, and, moreover, that this total quantity of wealth remains unchanged. Capital, therefore, would retreat progressively in quantity from the rulers, and the areas over which government united with it would contract. But we need hardly say that this state of affairs is a purely imaginary one. The quantity of wealth in the United States does *not* remain fixed. It is growing at an enormous rate. And it is growing because the quantity of capital is not limited by the quantity of land, but by the elastic implements of production found in machinery. Thus, one term of the ideal equation we have imagined is disposed of. Now, as to the other term.

Is it a fact that the new method of capitalization

really operates so as constantly to decrease the number of capitalists? If the reader will recall our discussion of the uses of a share of stock, or of other forms of capital of like nature, he will be prepared for the answer. Unquestionably, that answer is, No.

It is a matter of commonplace observation that the very utility of stocks and bonds consists in their negotiability. The desire of capitalists for increased wealth does not differ, in its nature, from the desire of other men for the same thing. If by compounding their capital into stocks and bonds, capitalists can increase their wealth, there is no room for doubt that they will so compound it. But the capitalist is better served in his desire when he parts with some of his capital than when he retains it all. And his desires move him to action which results in the dilution of his symbolic capital in as high a degree as the quantity of his actual capital safely allows. But the only effect of this process, as should be clear at a glance, is *not* the centralization of capital toward the persons of a few, but its *diffusion* toward the persons of many. It is this force of desire for quickly acquired wealth which determines the entire intricate system of industrial finance which has developed so rapidly in the United States, and which has amazed the financiers of the Old World. Thus we dispose of the second term of our ideal equation. If the wealth of the United States is growing at a very rapid rate, the number of capitalists is progressing likewise. And both of these facts are seen to be the effect of the compounding process so rapidly going forward in America.

These forces, like other forces used in the theory

of economic science, are efficient enough when we limit our considerations to ideal things. But economic science must ever remain incomplete and inadequate so long as it leaves out of account a force which is very different from those we have been presently dealing with. This force is *moral*. It will be futile to deal with only some of the forces which enter into social motion and leave other forces alone. We can imagine all sorts of ideal conditions, and such ideal implements are highly useful and necessary in calculation. But if they are to explain *facts*, they must idealize *all* facts. The importance of moral force in society is a fact which must never be forgotten in the considerations of any of the social sciences. The quantity of moral force may be large or small ; but if the quantity be relatively larger than smaller, it would appear that it deserves the more careful attention. And as moral force has been found, in our preceding studies, to be of prime importance, we cannot neglect it here. We may look, then, for the moral factor in capitalization.

All laws which are enacted for the restraint of individuals from appropriating property that belongs to others are approved alike by those whose possessions are large or small. It is not only because all men have some kind of wealth that they provide for the protection of all kinds of wealth. It is also because all are *potentially* wealthy in every form. The man who has no more than the things he actually uses for food, covering, and shelter, is vigorous in the prosecution of the thief who steals gold from a bank. Why? Not because the thing stolen is gold, which our supposititious man may never have seen, but

because gold is property, and because property includes the things which he really has. But if we were to suppose that our supposititious man were certain that he could never possess gold, in any quantity whatever, we can imagine that he would not be concerned with a law framed especially for the protection of gold. But if gold were passing into and out of his possession occasionally, he would be concerned with such a law very much indeed. Again, if there were probability that at any time, however remote, gold would become a part of his possessions, he would be highly concerned with such a law, nevertheless. And this, even if he had never seen the metal and had no hope of beholding it for a very long time to come.

If we apply the principle illustrated by this example to the matter of stocks and bonds, which represent property in capital, we shall be approaching the nature of the moral force which enters into the process of capitalization. Industrial stocks are commodities in the open market. They may be purchased for comparatively small sums. Any man may at any time come into possession of them. It is the greater comfort of all, therefore, that the sanctity of these instruments be protected by laws as stringent, in degree, as those which protect property of other kinds. But who is it that is conceived to violate that sanctity? Who but the capitalist who controls the largest quantity of the things to which the sanctity pertains? How can this individual be forced to respect that sanctity in a degree over and above that to which his natural bent and his natural love of wealth impel him? Clearly, not by the person in whose

possession the minority thing remains. His power is *nil* as compared with that of the over-capitalist who owns the largest share of that thing. How then can this majority capitalist be coerced?

The answer to this last question is suggested in the questions which precede it. The *law* must do it of course; and in attempting to do it, the government must unite with capital of kinds which it did not touch before, and in ways which are as novel to law and its enforcement as is the compound method of capitalization to the old. The new system of capitalization *compels* the government to interfere, not as policeman, but as *capitalist*. When private capitalists take advantage of their power to do injustice to their numerous partners, the government is called in, not to exert its police power, but to take over the management of the capital misused, and by this management see that justice is done to all in so far as can be encompassed. Why is it that the government is called in? Because the government is the *only* power that can be resorted to, if the moral force of the majority who hold the smaller shares of the enterprise is to be satisfied. And why is it that the government uses its power not as a policeman but as a capitalist? Why, if not because that method is the *only* method possible or conceivable in the case?

It may not be amiss, in passing, to remark upon a fact which is the subject of common comment in America. That is the fact that whenever government has so stepped in, the results have been highly beneficial. Railroads mismanaged by private individuals have been restored in a very short time, by government management, to a prosperous, healthy,

and profitable financial state, while the service of the roads has been rendered efficient in a high degree. And it is to be observed also that the power of government is appealed to by capitalists, who, through no fault of their own, other than lack of foresight, have found themselves incapable of managing the interests intrusted to them by others. This is no more than a surrender of capital to government.

We have seen that the quantity of wealth in the United States is rapidly increasing, and before proceeding farther in the inquiry, we must examine into a view held by many, namely, that the new methods of production and capitalization have an effect on the diffusion of wealth contrary to that which we have assumed to be the true effect. While it may be admitted that the new method actually increases the number of capitalists in the form of share and bond holders, it is still contended that the wealth of the community, capital included, is flowing back in increasing quantities to smaller numbers of men whom the new methods are found to benefit to the injury of the many.

Is this the truth? Or, to put the proposition in the proverbial form, is it true that, in the United States, the rich are getting richer and the poor poorer? If this should be found to be the fact, the cause of it should be found in the new methods of production and capitalization. And, furthermore, if this startling assertion be true, our law of capitalization should then fail completely. For we should find that one of its equations is false; namely, that government unites with capital over areas that vary proportionally as to the diffusion of wealth. Instead of

finding, as we do, that government areas of capital are expanding, we should find that they are contracting. For we have seen that with increasing wealth government unites with capital over areas which decrease; and wealth is admittedly increasing in the United States.

This suggestion brings us back to the law of wages we defined in the chapter on "Social Kinetics." We there saw that wages are determined by the productivity of capital. This fact would of itself increase the shares of wealth flowing back to labor, and would likewise enlarge the number of laborers. But to this natural economic force there is added the moral force of labor unions. Is, now, this double process of diffusion aided or retarded by the new method of capitalization, and by the compound character of production consequent upon it? The question is one which seems to have been discussed with considerable caution by such American economists as have examined into it. Looking at it broadly, we have the criticism to offer that much of the discussion hinges upon isolated facts rather than upon general principles. We shall prefer to adopt the latter method without neglecting to account for the isolated facts as we go forward.

If permitted to draw a somewhat elementary analogy here, we should fall back upon the familiar example of the application of the law of gravitation. Let us suppose that an astronomer finds an extraordinary perturbation in the orbit of a planet, by which the planet is drawn out of its ellipse into an orbital motion that is circular, or very nearly so. He would hardly be justified in concluding thence that the law of ellipticity were false. On the contrary, the exceptional

character of this perturbation would only serve to lay stress upon the law and more clearly demonstrate its truth. For having found the cause of the perturbation, he would know that if this cause were removed, the planet would readily take on the elliptical motion normal to other planets.

Logic of very much the same character may be applied to the effect which the new method of capitalization has upon the diffusion of wealth. There need be no doubt whatever that capitalists, acquiring suddenly the power to advance prices, would be tempted to use it in the belief that, by so doing, the quantity of their wealth might be increased. And there need be no doubt that this effect might be found to follow in many instances. But we should hardly expect to find them persisting in this action, when some little experience would teach them that its final effect would be the opposite of that which was first sought. A few bold experiments of this kind might result in suddenly acquired increase of wealth. But the successful capitalist is distinguished, ordinarily, by two characters—prevision and self-control. If he perceives that by waiting, his total wealth may be very much more largely increased than by sudden seizure of appropriable things, he will be moved to defer the satisfaction of his desires.

It should be conspicuously plain to the average important capitalist that demand for commodities is regulated by the supply. If the supply be large and the price low, the demand will be lively. But the greater the supply, the more pressing will be the necessity for the extension of the producing instruments. If, on the contrary, the supply be artificially

.

curtailed, the price will rise, the demand will decrease, and the quantity of producing instruments will diminish. A very few experiments would be all that would be needed to convince the compound capitalist that his desires could be more fully satisfied by allowing his capital to increase naturally and by working his plant to its highest capacity, while at the same time he would prepare for the new demand by extending his plants. We might even suppose that he would be tempted to produce periodic contractions of supply, or even attempt to force up prices while still producing at his highest capacity. But he would find, sooner or later, that this process disturbed, rather than facilitated his real purpose. The tendency, then, would be toward greater regularity of production, and toward increasingly less interference with the normal process of things. Repeated experience is the only sure way of arriving at true perceptions, no matter of what character. And the repeated experiences of the compound capitalist would teach him the very saving truth that, in large social processes, the good of all is the good of each. This truth has been long ago perceived by economists.

The sudden closing of large plants by newly formed combinations of capital is a phenomenon which has disturbed the minds of many. But there will be small occasion for such disturbance when it is remembered that these new combinations are only learning the causes of those over supplies of product discussed in the preceding chapter. The apparent waste is encompassed only for the purpose of preventing a greater waste. Of what possible use is wealth which cannot be consumed? In the transition state,

during which capital is passing from the simple to the compound character, there should be many perturbations in the motion of production; but such perturbations would tend to become smaller in number, and less painful in kind, as the compounding process increased, and as the motion approached its norm. It will be useful to consider, too, that the perturbations are never seen accompanying the process when the capital concerned does not consist of instruments used for the actual creation of wealth. The quantity of railroad track, abandoned and closed to traffic when railroad companies combine, is insignificantly small. And even in those productive industries which are brought to higher and higher levels of combination, the quantity of abandoned capital diminishes as the total quantity of capital combined is large. Thus in the union of a few vast interests, we see not a diminution, but an increase of productive power.

Sudden or great advance in prices by an industrial monopoly is always the occasion of sharp criticism. No matter how specious may be the pretexts given by the monopoly, the public always credits the advance to one cause only—greed of capital. And these two facts are interesting, not because of the advance itself, but of the fact that it is reprobated by the public on the one hand, and excused by the capitalist on the other. If these facts prove anything, they prove that there is a considerable moral force at work in the public mind, and a highly sensitive appreciation of its existence on the part of capitalists. For if capitalists were not *afraid* of public opinion, they would raise prices without palliation. The landlord in Ireland seldom apologizes to his tenants when

he raises the rent. Why? Because he does not fear the moral force of the community. But when we find enormously rich capitalists in the United States,—and capitalists who have a monopoly of their product,—*pleading poverty* as an excuse for an advance in prices, the situation becomes grotesque, unless we assume that the capitalist *fears* the power of the persons whose wealth he is attempting to appropriate.

It is a matter of not the slightest concern whether the capitalist is lying or not when he tenders an explanation and an excuse. He may be deceiving the public, or he may be telling the wholesome truth. But is it not plain that he is afraid of something or of somebody? If prices could be systematically advanced by clever deception, would not capitalists advance prices *ad infinitum*? And if economy compelled them to advance prices, how could they do otherwise? But in either contingency they would have to reckon with somebody. Else they would advance prices without ceremony. What is it they are afraid of?

Are they not afraid that any persistent advance of prices, from whatever cause, would draw the *government* into their affairs for the purpose of finding out the real truth of the matter? If these facts do not disclose the imminent proximity of government and capital, we cannot conceive what they do disclose. But they incidentally disclose the fact that the method of compound capitalization is not conceived by the people seriously to interfere with their actual purchasing power. The method is generally condemned for a very different reason, as we have seen. This condemnation does not arise from negative

grounds, but from positive grounds. It arises from the idea, organic in social America, that no man has a right to a quantity of wealth to possess which there is not potential equality for all.

It may be said that these views are theoretical, not practical; that, as a matter of fact, prices *are* advanced by aggregated capitalists. But we find that these advances are made by men who desire quickly to increase their wealth. They are precisely similar to perturbations from the elliptical form of a planet's orbit to the concentric form, but with this difference: That in the planetary motion the perturbation is due to the presence of a normal force, while with economic perturbation the cause is the presence of an abnormal force. If the normal motive which actuates capitalists impels them, on the whole, to defer their satisfactions, it should be plain that this motive will be the normal one moving capitalists of a compound character. For the desires of all men are the same in kind, and the compound capitalist is no different from capitalists of any other character. The theoretical view is therefore the soundest and the safest when we consider the facts of social motion, whether they pertain to capital or not.

But there is another view to be taken of this question which can hardly be accused of being too tenuously theoretical. That is the view which concerns the effect of the new method upon the diffusion of wealth when the element of labor unions is considered. It is a notable fact that capital of a highly compound character has less friction with labor unions than capital of other kinds. This would be *theoretically* implied in what has been already said.

But here we find that fact and theory are perfectly at one. Capital compounded in high degree must, perforce, capitulate to labor which is itself highly compound. Very little experience would teach capital the force of this truth. Indeed, actual experience would not be necessary for the perception of the true relation between the two forces. And if the labor union be conceded to be an efficient instrument for facilitating the progressive diffusion of wealth, any process which would assist it in doing so would itself be a cause of progressive diffusion.

Thus, if we sum up the force of the real facts seemingly for and against the view that the new method helps the progressive diffusion of wealth, we will observe that the facts which favor the affirmative conclusion outweigh, in very grave measure, the facts which seemingly favor the negative conclusion. And these latter facts have been seen, upon examination, to be really of an affirmative kind; for they are only perturbations of the mean motion, and they vanish when the causative forces at work resume their normal modes. If we now ask how these conclusions agree with our law of capitalization, we are convinced that they will be found to take their places in appropriate sequence.

In the hypothetical case we examined at the beginning of our application of the law, we saw that government encroached upon capital as the quantity of wealth diminished in a community wherein the government was supposed to be unchanging. There, the capital being chiefly in land, and the ruling class the owners of land, government would remain over

areas of land as other kinds of wealth would shrink in quantity.

In the United States, increase of wealth of all kinds swells the total quantity, but in the United States the greater part of wealth is measured, not by land, but by things other than land. (Speaking generally, we can gauge the power of a community by the horse-power developed by its steam.) Let us suppose, now, that the diffusion of wealth in the United States be non-progressive. That is, let us suppose that all men would grow richer, but that they would grow richer proportionally. There would be no levelling of the quantity of possessions in the hands of men so as to make the wealth possessed by each more nearly equal to that possessed by others. Each would grow wealthier in proportion to the quantity of his possessions. In this state of affairs it is clear that as wealth increased its total sum, the areas over which capital would unite with government would contract. But the contraction would be due to a cause other than that producing the same effect in a feudal state. An increase of wealth in land is not due to an increase in the *quantity* of land, but in its *value*. Now the increment in America, in the circumstances we have supposed to exist, would not be an increment of value but an increment of absolute quantity. This increase would be caused by the activity of capital, other than land, in creating new things which would add to the sum of riches.

If, now, we remember that product grows faster than capital, it will be seen that the quantity of things used for consumption would constantly grow

at a ratio greater than the ratio at which would grow the quantity of things used for production. In other words, the sum of wealth would increase more rapidly than the sum of capital. And as *all* capital, including land, would be united with the ruling class (in America the majority of all the people), government areas of capital would grow progressively small as the quantity of wealth would expand.

But, of course, this is not the fact. The diffusion of wealth in the United States *is* progressive. And as government and capital seek each other in direct ratios as to the diffusion of wealth, we should find that, as diffusion progresses, areas of capital over which government unites grow progressively large. The fact, as we have shown, is conspicuous enough. It should be clear, also, that the government in America being democratic, every process which facilitates the diffusion of wealth tends to enlarge the areas of capital with which the ruling power unites.

In a less economically developed group, the rulers can personally superintend the operations of capital. But there are two reasons why this is impossible in the United States. First, because of the highly compound state of capital; and, secondly, because of the great diffusion of political power. The only method practicable, in these circumstances, is the use of the central instrument of political power, and that instrument is the actual mechanism of the government. The power of the people is mighty, but it cannot be exerted except in one way, and that one way is determined by the substance of the state. We have seen that the form of the state, as defined in its gov-

ernment, changes with the moral standard of the people, entirely apart from the written constitution. We have seen that the real organic law is defined in the action of the people. We have seen that the people use the mechanism of the government to limit the action of private capital to ever decreasing surfaces; and we have seen that government takes over the positive functions of capital when private function fails to satisfy the moral wants of the community. We have seen, lastly, that these facts are all accompanied and produced by the compound method of capital, which serves at once to facilitate the diffusion of wealth, and to multiply the kinds of capital covered by government, and the number of points at which government comes into contact with them.

We have now to examine an aspect of the law of capitalization which may have already occurred to the reader, and which as yet may seem to be obscure. According to the terms of the law there must be present, in a community like the United States, a very curious phenomenon with relation to government and capital. In the United States the diffusion of wealth constantly progresses, while the quantity of wealth progressively expands. This compound motion should be followed by a progressive *retreat* of government from capital simultaneously with a progressive *advance* of government upon capital. This is a difficulty which seems, indeed, formidable, but which is quite the reverse when the nature of the difficulty is understood.

If this be the fact, — if it be really true that government advances upon capital and retreats from it at one and the same time, — the apparent contradiction

must be explained by the nature of capital itself. There must be some kind of capital with which *government never interferes in any circumstances whatever*. Now, if we can find that there actually exists precisely this kind of capital, — that is, a kind which government always leaves alone, and which it *must* leave alone, — then it will be plain that the contradiction in the law is purely apparent, and is really no contradiction at all. Is there such kind of capital, and where is it to be found?

We answer unhesitatingly that there is, and that it is to be found everywhere, in the most developed and undeveloped societies alike, and in the largest of quantities in the most civilized states. It is the capital used for the creation of product the value of which is largely determined by *contact in the process of creation with the particular personality of the creator*. Some products are more highly desirable than others because of the superior excellence of the workman. It matters little what the product may be, or whether the desirability be determined by the utility or the beauty of the object. All that is needed to prevent government from limiting the private use of capital is that such private use shall be purely individual. In the ordinary custom and trade of social life, men prefer the work of some individuals to that of others. The things created by the superior craftsmanship of one artist are more desirable, whether because of their excellence of art or of use, than those created by another. But it is clear that this excellence is a product of individual capacity, and depends upon the mixture of the labor of a particular individual with the thing produced.

Let us say that two shoemakers are supplied with tools and material of precisely similar kinds. The shoes created by one of them will be far more desirable than those created by the other. The superiority may pertain to the excellence of the shoes in use, or in beauty, or in both. But the value will be determined by the mixture with the capital used of the individual ability of the workman. To draw out this ability to its highest expression *the workman must be left alone*. In just so far as any attempt is made to mix his labor with that of others, will the excellence of the product be diminished. An effort to socialize such production would be absurd on its face. The term would be self-contradictory, for the essential quality of the product would lie in the individuality stamped upon it by its maker.

The man who possesses wealth, in a free community, may use his wealth for any purposes he may desire, so long as he does not restrict like liberty in others. He can use it, if he so desires, for the creation of any form of wealth he pleases. Of the new wealth thus produced he can dispose in whatever manner he likes. He can retain it for his own enjoyment; he can bestow it upon others; he can trade it for anything with which another may desire to part. The wealth used in the creation of the new object was his own. The new object, itself, is his own absolutely. We have here, therefore, a form of capital which government can never restrain, however remotely. If government be permitted to touch it in any manner whatever, or for any purpose at all, it can only be with the freely given consent and approval of the individual in whose hands the capital

at first is found. An attempt to limit the purely private function of such capital could end only in the destruction of the method of production thus practised. And unless we can conceive that men can take pleasure in thwarting their own desires, we cannot conceive that government can unite with this kind of capital save for assisting the process of individuation, and that kind of contact is really no contact at all. It is really the *disappearance of government, altogether, in the power of the individual*—a disappearance which has led some thinkers to the conclusion that individuation, and not socialization, is the method by which social forces flow toward the open, free state of equilibrium.

But this idea of social motion arises from a false perception of the *true* relations of government to capital, and from the lack of a knowledge of the method of capitalization and its law, which we have suggested in this book as being most probably the true one. If it were true that the only kind of capital open to observation were of that kind we have here considered, then it should be perfectly clear that *individuation* is the process by which the forces of capitalization bear societies forward to equality. But we know, as a matter of fact, that this perfectly free capital is *not* the only kind. And we know, furthermore, that at the present, and in the United States, it is comparatively small in quantity as compared with capital susceptible of socialization. The theory of individuation will not, therefore, account for all the facts we see. Nor yet will the theory of socialization account for them. But the theory we have here proposed, as reduced to general terms in

the formula of the law of capitalization we have here developed, seems, to us at least, satisfactorily to account for all the facts we see, and to unite the two apparently conflicting theories into one harmonious whole. It would seem to us that the theory of socialization is faulty because of the presence of facts which plainly contradict it. And the same may be said of the theory of individuation.

It is not to be denied that there is much strength in both theories — that both are incontestably supported by the presence of many facts. Nor is it to be denied that there is much weakness in both, for both are incontrovertibly broken down by the presence of facts of another order. In this situation the only rational conclusion to which we can come is that there is *some* truth in both, and *some* error in both. We have presented in our law of capitalization a general fact, the perception of which harmonizes the apparent contradiction, while it illuminates the point of contact at which both are indisputably true. And if this general fact be truly defined by the generalization we have formulated, then we have found that law the discovery of which is the end of social science.

If, now, we look abroad at the relations of government to that kind of capital which it leaves alone, we will find our position strengthened at numerous points. It is scarcely needful to say that the artist is the sole producer whom government never seeks to touch save as a solicitor for his favor. Whether the artist produces pictures, books, sculpture, or things that are useful apart for their beauty, he has been ever the adopted child of the ruler, even when the ruler is a

despot. Art of every kind flourishes as wealth is diffused, because the capacity of the individual for production is increased as capital is placed in his hands. We should say, rather, that diverse capacity for production is encouraged by the possession of wealth in the hands of increasingly large numbers. As men retreat from the bare subsistence point of labor, they are free to choose occupations congenial to them and in which, at the same time, they are most proficient. And it is very probable that those occupations in which men take most delight are the occupations for which they are best adapted.

It is obviously true that all men are not equally adapted to *every* occupation. But it is probably true that all men, normally healthy, have capacities which are excellent in some one way. And it is obvious, also, that if all men were once removed from the necessity of devoting most of their time to labor expended for purposes of bare subsistence, especially in their childhood and youth, when choice of occupation is freest and surest, they would probably select the occupation for which they are best adapted.

This process we observe, even now, when natural selection operates so as to force men into occupations not congenial. But natural selection does more than this. It compels some men to *remain* in occupations for which they are least adapted, and forces others to take up occupations for which they are not adapted at all. But in spite of this forceful fact, we find men with aptitude for special occupations seeking them in the leisure time won by work in the undesirable ones. All men do not succeed equally because of variation in capacity. But the fact that numerous

signal successes are made in this very way is an evidence of the more remote fact that, with more equal opportunities, the number of signal successes would be proportionally large. Natural selection forces many men into occupations which they do not like, and from among these it selects many for great successes in work done during the hours in which they are free. And if we conceive of a society in which the uncongenial occupation exacts increasingly smaller effort, and yields to the individual increasingly large returns of wealth, we can readily conceive of natural selection producing ever enlarging numbers of men who succeed in pursuits to which they turn in their leisure from motives of love. In this way natural selection, developing society through the forces of socialization, also develops it through the forces of individuation; and the first process is the cause of the second.

But this development is really no more than the advance of government upon one kind of capital and its retreat from another. In the operations of purely private capital—that kind which government cannot touch—competition must always increase, and the force of natural selection must ever produce and develop higher and higher degrees of excellence in production, and increasingly large numbers of men in whom excellence is found. But while this kind of competition must ever enlarge, competition of the reverse character must ever diminish. For as the diffusion of wealth progresses, government areas of capital expand, and so long as diffusion advances, government must take over increasingly large areas of capital over which it can be found to exercise con-

trol. To this action there must be some end. It cannot go on forever. Where, then, must it stop? Where, if not at that point at which government has united with *all* the capital with which it *can* unite? When this point is reached, economic social forces will be in equilibrium and not before. And what force is it that alone can determine when this state has been reached? Is it not the perception that there can be no further diffusion of wealth by government action? Is it not clear that when government interference with capital would serve only to hinder, rather than help, the very process which would be most desired of all, government interference would stop *of its own force*?

The line beyond which socialization of capital cannot conceivably extend is drawn by no doubtful circumstance. It is drawn by the most vivid and spontaneous ideas in the consciousness of living things—ideas of pleasure and ideas of pain. It is marked with as much certainty, and can be calculated with as nice precision, as the orbit of a planet the relations of which to the sun, in mass and distance, are perfectly known to the mathematician. No mysterious power of intellect is needed to say whether any particular kind of production is capable of socialization or not. The proof of this assertion is found, not in theoretical treatises upon production, but in the actual socialization of all kinds of capital susceptible to this method. And if we know what kind of capital is susceptible and what kind is not, the problem is made clear to the view of the simplest intellect.

With the equilibrium we have sketched in force, it

is manifest that the quantity of wealth must ever increase with the capacity for enjoyment found in each individual, and with the growing total capacity caused by increase of population. The method of division would then be in equilibrium with the method of production. This equilibrium could take no form other than one in which each individual would receive a share of government product *equal to the share received by every other individual*; or, which would amount to the same thing, each would have a *right* to an equal share if he desired to take it after he had performed the required labor. Or, to remove the proposition a step farther back, each would have a *right* to the performance of the labor which would give him the right to the equal share. Any further change in the relations of government to capital could only result in a disturbance of the equilibrium, and such disturbance would be, to the moral sense of all, the most highly repugnant social idea conceivable. Private production and private capitalization, limited by this equilibrium, would then be free, to the highest conceivable degree, to develop by lines which the increasing variety and the increasing quantity of wealth would encourage.

In current discussions of the socialization of capital men suffer under a confusion of ideas, because they deal with purely imaginary facts rather than with facts as they really exist. Thus the advocates of individuation, or of unrestrained competition, believe that the gratification of desires will tend to eliminate the desires which are gratified; and the advocates of socialization believe that the prevention of gratification will have the effect of making men altruistic

rather than selfish. But this kind of theory is based upon pure imagination, and it is nowhere justified by facts. The poor man always desires to be rich, and the rich man always desires to be richer. We cannot construct a theory of social growth upon ideas of what *ought* to be. Perhaps no two men agree precisely as to an ideal state of society. Once that we open up the question of what *ought* to be, we find ourselves placed in a labyrinth of impossibilities from which there is no escape.

The nature of a state which *ought* to be will depend very much upon the ideas of the individual who is constructing it. Some men are highly satisfied with things as they now exist. Some are convinced that everything now existing is essentially wrong. Others would change some conditions and leave some conditions alone. If we permit questions of what *should* be to enter into our theories of social life, we may as well rest content with the position that all men should be lofty gods, sitting at tables of jasper, and drinking nectar from tankards filled in some miraculously mechanical way determined by the will of the consumer. Theories of this kind are as easy of construction by the unlettered beggar as by the most opulent philosopher. But they are all of a kind. They have very little association with facts. They are to true social science what the ancient cosmogony is to true natural science. They are of high value to true social science as an indication of moral progress, but valuable only in that way. They are not causes of social progress, but effects. And we must not look into these theories in the hope of discovering the character of social motion.

It is illogical to hold that any socialization of capital will entirely destroy economic competition. We cannot conceive that men will go on working, when the highest incentive to labor is taken away. We do not find this to be the fact at present. There is no conceivable reason why it should ever be found to be the fact. The scientific man, who labors incessantly to discover a great truth of nature, would cease his effort were he once convinced that his labor were hopeless. The man who loves wealth for the liberty it gives him would make no effort to secure larger possessions if he were once satisfied that no amount of effort could possibly enrich him further. The contrary would be the fact. He would endeavor to secure himself in the possession of the largest possible sum of wealth by the least possible effort. Men actually do this now. There is not much reason for believing that they will ever do otherwise. Questions of conscience, or moral obligation, have nothing to do with the case. No matter how sensitive may be a man's moral sense, he will seek easement of his state by conduct which his moral sense approves.

In any social state in which there could be no competition, rewarded by an increase of wealth or of power, art would languish, invention would cease, production would retrogress, science would falter, capacity would diminish, and social forces would flow backwards. Such a state would not build up moral character to broader proportions, but would break it down. Instead of producing men whose moral sensibility would become increasingly acute, it would produce men in whom moral sensibility would become progressively obtuse. The phalanstery idea of social

progress has been, therefore, always repugnant to men of every kind. And without competition, and competition of a very active and incentive kind, the phalanstery is the only norm to which socialization can be seen to tend.

It has been frequently asked, Why should men strive to invent new and easier devices for labor when such invention could not be seen directly to benefit themselves? Why, indeed? Why should a man, from any conceivable moral motive, take most delight in working all day long at a machine which turns out shoes, when he could write romances, or paint pictures, which would bring him returns of wealth vastly greater than his labor of shoemaking? Why should any conceivable moral motive compel an individual to prefer to lay bricks, while he had a natural capacity for designing highly beautiful fashions in coats, or for constructing a device which would simplify the labor of preparing food for the table? And why should the state *compel* an individual to lay bricks, when he desired to use the wealth in his possession to create coats which would bring him larger returns of wealth than the state could ever pay him for his capacity as a bricklayer? If he could secure more wealth by laying bricks than by any other method of industry (and wealth was the thing he most desired), we can readily conceive him continuing to lay bricks of his own free will and impulse. But we can scarcely conceive him doing so when there was a big demand for his services in another direction, and no compulsion whatever forcing him to remain in the occupation of the bricklayer.

We need not be troubled with the question of

what the state would do in the matter of inventions in capital of a kind that is susceptible to the process of socialization, as, for example, an invention which would simplify the manufacture of shoes by machinery. We need go to no imaginary state of morals or of industry to answer the question. The answer is found in the present conduct of the state. Government *protects* the individual in the enjoyment of the fruits of his genius. And government will never be able to do anything else unless invention is to languish. But government does not now protect anybody in perpetuity. It gives to every creator a reasonable compensation for his genius. It relieves him of the necessity of continuous labor in occupations that are distasteful.

It can do no more than this without taking away the incentive to genius. For if an individual is to be left the sole master of an idea discovered by him, he may find that his own liberty is painfully restricted by like liberty in others. The individual who would discover that oysters were good to eat would hardly serve himself by insisting that none else should be allowed to eat oysters without his permission. For another might discover that mutton was a very desirable article of food. The discoverer of oysters would then have his oysters *ad libitum*, but he would be minus mutton; and mutton might very easily be conceived as being more desirable than oysters. Furthermore, it might be found that the discoverer of mutton would not care to trade his mutton for oysters; and hence he would have a very distinct advantage over his neighbor.

But while all this might be very true, we cannot

imagine a discoverer of oysters, or of mutton, surrendering his idea without compensation of any kind beyond that found in the enjoyment of his particular share of food. In other words, we should hardly seek for an incentive to invention of any kind in motives of pure philanthropy. We can imagine that this motive might be prevalent and very powerful in a very rich and very free community. But we must now allow ourselves to consider this motive as the present cause of social progress. And if it should be imagined as existing, in an ideal state, it can only be conceived as the effect of the process of socialization and individuation we see going forward at present. What is true of one kind of invention or art is true of every kind.

While the state limits the power of the individual over his individual invention, it does so only because the individual finds that he is better served by such limitation than by the reverse action. But, apart from new ideas, the state can never limit the freedom of the individual in the use of capital to create wealth which shall bear upon it the stamp of his personal skill. As we have already seen, the only contact with capital of this kind possible to the state is the facilitation of the private use of capital, and when this contact becomes operative, the power of the state disappears in the power of the individual. It should be clear from these premises that the increase of wealth by social methods should act so as to increase the quantity of wealth produced by individual methods; that as men become socially controlled in the use of one kind of capital, they become individually free in the use of another; that while govern-

ment is advancing toward capital in one direction, it is retreating from capital in another ; and that while this compound motion proceeds, wealth is diffusing itself over ever broadening areas of men, and the quantity of it perpetually grows.

In the beginning of our chapter on "Social Kinetics" we have suggested that as the laws of social growth are universal, we should find that the equilibrium of social men should be similar to that of social bees. And this we have really discovered to be the fact. All the capital used socially by bees is controlled by the group. There is no free capital in bee communities because bees do not use capital for purposes other than of food. And as the desires of the bees for food are uniform and not diversiform, as among men, there is no force of desire which can develop diverse or individual methods of production or service. If such diversity of desire were present in bees, we should find that free capital would exist in these societies as it exists in societies of men. And this difference between man and bee is found to lie in the high complexity of the nervous and alimentary apparatus of the man as compared with that of the insect. Among bees there is no competition because there is no demand for product which the government cannot create. But among men there is no conceivable limit to the demand for product which the state could not possibly create by any conceivable method.

We cannot conceive of a group in which state control of all capital can disappear in individual control. We cannot do this because all conceptions of the disappearance of state control imply a destruction of

the social character of man. We can conceive of community-power and community-control as vanishing from a society of bees; but when we do this, we do no more than conceive of the bees lapsing from the social to the solitary state. And with this lapse will disappear all the basis and material of social science as applied to bees. We could then study the characters of the individual bee and discover its motives and its action. Competition of a very active and intense kind exists among animals which live in a solitary state. This competition is practised between the solitary animal and every other animal, social or solitary, whose desires conflict with those of the solitary one. Competition is then a struggle to the death. It may be a passive or an active struggle, but its issue is life or death. Among men, the issue is not one of life but one of wealth. We can conceive of the state, through forces of natural selection, eliminating that kind of competition which might end in the death of an individual, and we know that moral force is acting very powerfully in that direction. But we cannot conceive of the state, or any other power, eliminating that competition the issue of which is perceived to be, not death, but larger amplitudes of life for ever enlarging numbers of individuals.

Thus we observe that our law of capitalization unifies the diverse facts observed not alone in societies of men, but in societies of other kinds; that it harmonizes diverse ideas of social science; that it discloses the causes of social facts to lie in desires of men which are an inalienable part of their vital nature; while at the same time it provides a theory which would seem rationally to explain those growing

moral wants of civilized men, accounted to be the character in man that is distinctly human.

In reversion to the subject of capitalization in the United States, we may here consider the effects being worked out by the forces at play. The economic revolution going forward in America is accompanied by a political and moral revolution. The government is changing so as to adjust itself to the new economic conditions which have followed the old régime of open competition in industries which were susceptible to the socializing method of capital. Changes of every kind are more rapid in the United States than in New Zealand, because the form of government in New Zealand is in advance of its power of production, and of the complexity of its capital. But in the United States the revolutionary process, for this very reason, must carry the expansion of government to higher areas of capital than those observed even in New Zealand. Instruments of production in the United States are infinitely better suited to the change from private to public function, and because of this, the moral ideas of the community have progressed farther than in the South Sea democracy. Government must hence take over comparatively large areas of capital owing to the superiority of America in the quantity and variety of wealth of all kinds.

In the United States there are comparatively few individuals who are comparatively rich. But these form the bulk of the people who are demanding government interference. They include well-to-do non-capitalists, small capitalists who are not partners in compound enterprise, and even large independent capitalists who believe their well-being threatened by

the new method. How this revolution must act, when carried to its inevitable end, can be seen in the example of the French revolution, which, although comparatively rapid and violent, has produced results precisely similar to those now in process of accomplishment in America. In France the sudden seizure by the many of capital in land held by the few has carried France to a social state far beyond that of Germany, of Italy, of Russia, and of all European states except England. And if England is an exception, it is only because capitalization in England has been progressively developed along lines other than those of land.

In England, therefore, land has not been the fulcrum used by the power of the people in changing the government and in causing progressive diffusion of wealth. The method which has helped France would not have helped England in such immediately perceptible degree. Hence we find that moral ideas as to land are not of extraordinary force in England, as they are, for example, in Ireland, where land is the principal implement of capital. France, in many respects, was, before the revolution, no farther advanced economically than was Germany. But after the revolution, which was really only an extension of property right in capital from a small number of rulers to a very much larger one, France leaped forward in a degree measurable by this very change.

We could conceive of a violent revolution in England by which that nation would be carried beyond the present state of America. But in the United States we observe a moral sense far more acute, as regards capital, than is found in the mother country. This moral perception gives rise to a demand for gov-

ernment interference with capital not common in Britain. But it will be observed, too, that this demand in America for government control does not pertain to capital in land, but to capital in instruments other than land. This is owing to the comparatively free distribution of land and to the vastness of its quantity. Government must, of course, rise to the control of land, but only of such land as is inextricably associated with production, other than agricultural, and with circulation. Contact with land of these kinds must be immediate. Contact with land used for agricultural purposes would follow because of the social character of the largest part of agricultural production. But manufacturing capital will be the primary fulcrum, and agricultural capital the secondary one.

We can thus conceive ourselves safe in the assertion that the most rapid action of the law of capitalization is found in that civil group in which the instruments of capitalization are developed to the highest complexity. And the implication in this assertion — namely, that the past and the present are sure indications of the future — will commend itself to our reason as the most rational conclusion that can be drawn.

In summing up the action of the law of capitalization we may survey that action in its theoretical phases. If we analyze the formula of the law, we will find that it presents three possible theorems. Areas over which government and capital are united vary when: —

I. With the diffusion of wealth fixed, its quantity is variable.

II. With the quantity fixed, the diffusion is variable.

III. With the quantity variable, the diffusion also is variable.

These major theorems may be divided into eight minor theorems as follow :—

When, with the diffusion fixed : (1) the quantity increases, and (2) the quantity decreases.

When, with the quantity fixed : (1) the diffusion increases, and (2) the diffusion decreases.

When, with the quantity and diffusion variable : (1) the quantity increases and the diffusion decreases ; (2) the diffusion increases and the quantity decreases ; (3) quantity and diffusion decrease together ; and (4) quantity and diffusion increase together.

Taking up the theorems in the order here laid down, we find that if the premises of the first minor theorem be true, — that is, if the diffusion of wealth be fixed and its quantity increases, — government unites with capital over contracting areas because product multiplies faster than capital, and the quantity of capital in the hands of the rulers diminishes as compared with the total quantity of wealth. It is evident that there is no change in the method of government in these circumstances, for political power depends upon capital power, and when wealth is diffused, political power is diffused with it. The method of government cannot change so long as all individuals grow wealthier in proportion to their possessions, and there is no levelling of individual possessions toward equality.

If the second minor premise be true, — that is, if the diffusion remains fixed while the quantity of wealth decreases, — government areas of capital will expand, because the quantity of capital will increase as com-

pared with the total quantity of wealth. The proof of this theorem is implied in the proof of the preceding one.

If, now, the quantity of wealth be fixed and the diffusion increases, government areas of capital expand because the method of government changes so as to enlarge the number of rulers as compared with the total population. Secondly, if, while the quantity remains fixed, the diffusion decreases, government areas of capital contract because the number of rulers diminishes as compared with the total population.

The proof of the four remaining minor theorems is implied in the proof of the first four. If the quantity increases and the diffusion decreases, government recedes from progressively larger numbers of individuals as compared with the total population. If the diffusion increases and the quantity decreases, we approach pure communism, for as each individual becomes more powerful politically, he will use his political power to further his economic ends, and these can be best served by common right of use to the needful wealth. If the quantity and diffusion decrease together, government will tend to disappear and the process will end in the death of the society as a political group. The remaining minor theorem is demonstrated in our treatment of the industrial and political changes going on in progressive societies at the present time, particularly in the United States, wherein the quantity and diffusion of wealth are advancing at one and the same time.

The action of the law of capitalization may, and probably does, seem to be obscure in two particulars. It may be said, first, that in our broadest conception

of the term government, — that is, the political rulers of a realm apart from the mere mechanism of government, — we include the capital which is worked up into wealth with the individual stamp upon it. A capitalist who uses wealth in this way is, it may be objected, as much a ruler as he who uses capital susceptible of socialization. Therefore government, in the broad sense, unites not only with social capital but with individual capital, too. The second obscurity lies in the process by which the mechanism of government itself is forced to unite with such capital as is really socializable. How does government naturally take over the instruments of production which have been already socialized by private methods? For it may be said that it is possible to conceive that private socialization shall go on indefinitely even in spite of the very manifest moral tendency toward unition. Let us examine first into the first-named objection.

It is true that the artist whose product is made valuable by his personal contact with the capital used is, or may be, as much a ruler as he whose capital is of the social kind. But it should be clear also that his relations to the state are of an order very different from that of all other producers, whether capitalists or not, inasmuch as neither his labor nor his capital can ever be compounded with that of others. However much the political machinery of the state may interfere with the labor or capital of others, it can never interfere with him. His function as a ruler is distinct from his function as a capitalist, at least in its purely economic aspect. If he is a ruler at all, he can only rule these economic activities of

the group which are based upon *social* capital. In other words, the *character of his production is absolutely individual, and his capital power is greater than that of the state*. In order that it may benefit by his use of capital, the state must surrender its power into his hands. Whereas, if the individual who uses socializable capital is to be benefited, he must surrender his power into the hands of the state.

It will be observed, too, that the power of the artist increases as the gap widens between socializable and individual, or non-socializable, capital. But the width of this gap depends upon the quantity, variety, and diffusion of the wealth possessed by the group; that is to say, it depends upon the complexity of the environment. In a simple society, in which capital is differentiated in a very low degree, the power of the artistic worker would be correspondingly small. As capital differentiates, his power increases, and he is removed farther and farther from all possibility of political interference from the group. His wealth may give him power over his fellow-workers; but *their* wealth, however great, can give them no power over him either in the production or distribution of the things he creates. And such political power is not even sought or desired by the state, for all men at once perceive the true relations of government to capital of this kind. In other words, it is in this respect, and only in this respect, that social motion is assisted by forces of pure individuation. Thus it is seen that economic differentiation is accompanied by political differentiation. The individual producer must ever be the master of the state, and the social producer must ever be its ser-

vant; and this whether we consider the state as being the mechanism of government, the political unity of the group, or the economic code by which the group creates and diffuses its wealth. Government, hence, does not unite, in any manner, with the capital of the individual when used individually, although that capital confers on its owner, or user, a power greater than that associated with capital of the other kind.

The second obscurity requires somewhat more lengthy treatment. To clear it up, we must consider the growth of a group with concern to the differentiation of capital itself. The government of a group with a movable habitat is necessarily simple. That of a group living in a temporarily fixed environment is comparatively complex; while that of a group in a permanently fixed habitat is more complex still. But comparative fixtured habitat only means comparatively complex environment, or comparatively great and widely diffused wealth. Complexity of government always accompanies complexity of environment, because political growth is the product of industrial growth. In this causal relation of government to capital will be found the explanation we are seeking of the mechanical process by which socialized private capital must pass into public capital, not capital merely controlled in its uses by the state, but public capital in its true sense; that is, capital actually used by government for the creation or diffusion of wealth. Let us consider the process historically.

In a simple society a strip of land will be used by the community for the purpose of fetching goods to market. This tract of land we call a road. If, now,

the economic system of the group is simple, the contact of the state with the road will be slight. The road may be owned by a private person or by a number of such persons who might be supposed to derive from its use a certain revenue. In a group characterized by very simple capital, we can suppose that the owners of the strip would be powerful enough to control its uses not only, but also to control the production of the users of the road. But as soon as we suppose that capital has differentiated to a considerable degree, and the government has undergone a similar transformation, we must conceive that the power of the group would be used to separate the road from private ownership and make it purely public in its function and structure. Once having passed into the public category, we cannot conceive that the road would ever again resume its private character. Its public character must, on the contrary, become organic and so remain as long as the power of the majority be conceived as being greater than that of the minority, and that power would continue to grow greater because of the growth in quantity and diffusion of wealth.

Let us now suppose that the character of capital in a simple society be changed by the discovery of a metallic money. This discovery would soon multiply all kinds of wealth and capital. The state would be forced to seize control of money for many reasons, precisely as it would be forced to seize control of the road. But the obviously plain reason would be that involved in the economic welfare of the individual using money. The political power of the group would naturally and mechanically be used to replace

private control of money by public control. And if we conceive of this public control as once having been established, we must conceive of it as becoming organic. But we cannot conceive that money would remain under private control if we conceive of money as being something different from the capital used in the actual creation of wealth.

The same logic may be applied, for example, to instruments of communication used by the group for the facilitation of its economic life. We can imagine a private postal system as long enduring in a comparatively simple political group. But we cannot conceive that a purely private postal system could be maintained in a very wealthy group, the rulers of which were the majority of the people who would be capable of using the system generally for private communication. A military government would quickly seize such a system, but economic necessity would lead to the seizure as surely if not as rapidly.

If, now, we use the terms "railroad," "negotiable paper," and "telegraphs" instead of "road," "metallic money," and "postal system," we have not departed from our principles at all. We have simply supposed that the economic system connoted by these terms is only a more complex system than that connoted by the terms first used. The complexity is due, of course, to the complexity and increased quantity and diffusion of wealth. But the principle, which is found to apply to the strip of land used as a road, applies also to the strip of land used as a railroad. There is no essential difference whatever. Nor is there any difference between money and the new instruments of capital other than that described in our chapter on "Social Kinetics,"

and this difference does not remove the new instruments from the action of the law of capitalization.

In a simple society government contact with capital is necessarily a simple one. The political code and practice partake more of the individual than of the social character, and the political code arises out of the economic code. As the economic system becomes more social, the political system changes in like manner. Compound economic systems produce compound political systems. Both grow together, and both *must* grow together because they are the products of the forces released when the political group begins to live in an unchanging locality. If government be used solely for the regulation of the economic life of the group, its character must progress in complexity with that economic life. If our general law of the relations of government to capital be true of a group in which capital has been differentiated in a very low degree, it must be true also of a group in which capital has been differentiated in a higher degree. As we proceed upwards from a simple and loosely organized group to a more highly organized group, we find developing an instrumental *mechanism* which integrates political power, and which differentiates the actual functions of ruling from the individual into the social form. This growth is economic-political. It is not that the economic growth of the group runs on in advance of the political growth, and that the latter overtakes the former by a succession of leaps. By no means. The political life of the group is constantly readjusted to its economic life. Political structure and function arise out of economic structure

and function just as nervous growth arises out of vital growth.

With this fact in mind, it should not be difficult to perceive that the extension of government to capital in a highly differentiated economic group keeps equal pace with the economic changes going on within the group. It may appear, outwardly, that government is still far away from the function of actual ownership and production, but in reality the two are already one, and need only one movement of the group to clear away the seeming, or the formal, separation. This apparent difference vanishes when the form of the government is changed so as to conform with its substance. With this change always comes wider liberty for the life of the group, but the action by which the change has been effected is only an overflow of the internal economic forces of the group upon the form of its political life.

The action here described is observed throughout the entire economico-political history of the world. We not only find that economy and government have thus changed together in the history of every progressive group, but we find that between the most savage and the most civilized groups lie all grades of difference, just as we find a gradual succession of steps in the forms of life from the cell up to man. We can easily conceive of England becoming a group almost precisely like the United States; and of corresponding changes in groups which rank successively lower in the social scale down to the merest savage states, such as that of the American Indians.

We may be pardoned if we use the familiar illustration of the butterfly to indicate this breaking down,

or rupture, of political by economic structural growth. There is no sudden change from the caterpillar to the full-winged moth. And indeed this slow change of internal form is a law of all life growth as well as of social growth. The shell, from which the chick breaks forth fully developed, has much the same general appearance as the shell of a new-laid egg. But the eye of the breeder can see important differences. There is no need of any external or artificial force to break the shell in which the chick is growing. The life of the chick is vastly more free, and its growth more rapid, *after* the shell has been ruptured, as is also the life of the moth after the rupture of the chrysalis. But we can hardly say that the growth of the moth is hindered by the chrysalis-shell. That shell is a condition of its growth. And so we may say that political forms are conditions of economic life, which vanish when the economic life of the group has outgrown them.

Thus we observe that there is no real difficulty in perceiving how the law of capitalization acts in highly organized groups wherein the instrumental mechanism of government seems to be separated by an hiatus from the function of actual production. The life growth of the economic organism proceeds constantly beneath the chrysalis-shell of the political form which the group assumed on emerging from its simpler form into its more highly organized state. In the social, as in the vital organism, the growth is toward constantly freer and constantly larger amplitudes of life and movement, and the process stops when the economic and political life of the group are in perfect harmony and equilibrium, and not until then. This

conclusion is inevitable from the nature of the law of capitalization itself. The same principle which applies to a feudal or an imperial state applies to a democratic state in which capital and government are more highly complex and wealth more generally diffused. If the law be true of the one, it must be true of the other.

We may therefore draw a corollary from the demonstration of the general theorem, in which we can assert that *government unites with capital over areas of equal complexity.*

CHAPTER X

METHODS OF COMMUNICATION

FEW pastimes are more alluring than that of giving the imagination free scope in building up the future of human society. It is a pastime which has exercised the brain of very eminent and very obscure philosophers, from Plato down to present-day writers of so-called "scientific fiction."

It matters little how lightly some of these extraordinary persons are weighted down with genuine knowledge of the real facts of social life. The truth is, that the less one knows of social science, the more confidence he has in his anticipations of future social existence. Some of these attempts at prevision are merely wild guesses, founded upon the extravagantly ignorant conceits of their authors. In them there is no evidence of sense or reason, proportion or purpose. On the other hand, many of them are earnest efforts to forecast the future by a more or less careful study of its germs as they are found in the present and in the past. Such works as these are genuine contributions to the literary movement we noted in our first chapter. And all of them, of whatever kind, are to be regarded as something more than a mere desire to write a book which will sell. We must regard them as a manifestation of a deep-seated and general interest in the subject of social motion.

Of this kind of books there is none so very capably composed as the two works of Edward Bellamy, "Looking Backwards," and "Equality." If Mr. Bellamy won fame and fortune for himself by writing the two books named, we must not allow that fact to obscure to us the very praiseworthy motive which upheld him in his labors. The intolerant criticism inspired by his ideas is chiefly advanced by persons who are quite out of touch with the merits of the question. It has become a kind of fashion to speak disdainfully of socialists as "dreamers." But it will be observed that so very competent a critic as Mr. Herbert Spencer seldom uses that word when he is discussing socialism. He refrains from its use because he knows quite well that socialism, whatever else it may be, is not, in any manner of speaking, a "dream." He knows that it is a *fact* which very seriously discomposes his theory of individuation. And the most precious advice to be given to light-headed critics of Bellamy is a commendation to look up Mr. Spencer before disposing of socialism with a wave of the hand.

We have no desire to speculate with Bellamy on the future of human life. But we can truthfully say that if our law of capitalization be true, the future of civilized society will be broadly similar, in at least its basic features, to the state he describes in his brilliantly conceived and cleverly written books. But Bellamy assumes too much when he supposes that government can ever assimilate the labor of those whose highest utility in the social scheme lies in their very individuality itself. Government can do no more than absorb such capital as can be made the

object of regimentation. Until we can imagine that men, with their highly complex desires, can fall into a dismal phalanstery like a bee-hive, we cannot imagine that government can do more than own and operate capital of a kind which the "trusts" own and operate now. It is clear that there can be no combination of capital for purely productive purposes, when the capital in question is that used by an individual whose contact with it is the *conditio sine qua non* of the value of the product.

But if we restrict the equality of remuneration for labor to the wealth created by government industry, we shall have a conception of economic equality in perfect accord with our law of capitalization. This would be a true social equilibrium so far as wealth is concerned; and it could never be disturbed as long as men would be moved by the same desires that move them now. It was this economic equilibrium that Bellamy was looking for when he put his fancy to work upon the material he found before him in the social state of the American people. It will be observed, too, that Bellamy accounts for the transition by postulating *moral* forces as its cause. Still, Bellamy has fallen into the error of Marx in supposing that capitalists can create a moral revulsion by robbing the people of their wealth. That error is disposed of by our law of the increasing capacity.

This touch of criticism is made here to call attention to that fact that while we have provided for an economic equilibrium, we have yet to consider the equilibrium of population hinted at in another place. Before approaching that highly important subject, we must ask the reader to turn his attention to an order

of facts which have a distinct bearing, not only upon the future of population, but also upon the very economic equilibrium out of which, we hope to show, the equilibrium of population is arising. The highly intricate character of our subject demands these excursions into seemingly remote fields ; but, as we overtake the objects of our search, we see that to have neglected them would have necessitated the double labor of retracing our steps. It may appear that methods of communication have only a remote relation to the facts we have been just discussing ; but, as we proceed, we shall find that this subject is of prime importance in bringing together the elements of social motion out of which the twofold equilibrium of human society is building itself up.

In speaking of a group of men, living under an organized government, we frequently describe it as the "body politic." By the term "body politic" we convey the idea of a compact mass of human beings each of whom is only an insignificant part of the whole. The group itself is considered as a definite, corporate organism, the active units of which are individual men. Such a group is likewise frequently denoted as the "body social" ; and although there may be a very fine shade of difference between the meanings of the two terms, they both serve a very similar purpose and describe, in a general way, the selfsame thing.

When we use the term "body" as applied to living men, we imply the existence of a mind. This is true, at least, of general speech. If, therefore, an organized group of men may be said to have a social body, we can as truly assert that the same group has a

social mind; and this term is used to denote the thought-life of the group, as the correlative term is used to denote its bodily life.

The nature of the social mind is a question giving rise to no inconsiderable dispute among those who are concerned with social science. Many very cautious writers are afraid that the use of the term, if too freely indulged in, will lead to confusion and misconception, just as these same writers are concerned lest similar conceptions shall prevail when we consider a human group as an *organism*. The fear, however, seems to be groundless in both instances. In Chapters III and IV we discussed the latter phase of the subject, and we need not enlarge upon the definitions we then made. If by the term *social mind* we denote the united thought-life of the group, there will be no danger of a misunderstanding. Indeed, the average reader will be quite unconscious of the danger we are hinting at. But he will see the matter in another light when we explain that some theorists believe that the social mind is not merely the sum of individual minds, but is itself *an actual organic unity*, a distinct and substantial entity, a self-conscious, integrated, harmonious structure, quite as closely organized and quite as intensely sensitive as the mind of the individual man.

This conception of the social mind is regarded by some critics as being altogether too mystic to admit of scientific proof. We shall neither accept it nor reject it here, but shall proceed to our analysis of the social mind which will, perhaps, disclose the fact that this conception is no more mystic than is the popular and common idea of the social mind; that is, the idea of

a composite sum of individual minds functioning together. The question seems to resolve itself down to this plain statement : Is the social mind a perfect unity, precisely similar in its general operations to the mind of an individual man ; or is it merely a number of individual minds, each operating in an independent manner, and only associated with other minds through the media of sight, hearing, and touch ?

In making this analysis we shall touch upon a question which has stirred the thoughts of men since the human race began to manufacture written records of its own doings. That question is the existence of an immaterial or spiritual soul, — a substantial, conscious entity, resident in the human body but, in a way, independent of it, — the intellectual, rational, metaphysical *ego* of man.

Does there really exist an extra-physical, immaterial soul such as we have described ? The question is an important one and no doubt highly interesting. If it could be proved that there is attached to the body of man, or of any other animal, an immaterial something, — a something which, while in no degree partaking of the nature of matter, is yet capable of consciousness, — a very considerable addition would be made, it need not be said, to the sum of demonstrable truth. But it should not be forgotten that the existence of a non-physical soul is a matter of *belief* purely. Positive proof of the existence of such a thing could be encompassed in but one way only. That would lie in the way of showing to the senses some evidence of this immaterial intelligence. Now this is precisely what can never be done. We can never bring the senses to attest the existence of

something which the senses themselves cannot perceive.

Nobody can prove that an immaterial soul does *not* exist. Yet it is just as certain that nobody, who uses the methods of modern psychology, can demonstrate that it does. Some very eminent psychologists *believe* that a spiritual soul abides in the bodies of men. Others adhere to the opposite belief. But the beliefs of psychologists have nothing to do with demonstration. It is a matter of supreme indifference *what* they believe. Yet it is a significant fact that some psychologists proceed with their work quite apart from any question of this kind. The province of psychology lies in the structure and function of the nerves and the brain. We can demonstrate the action of ganglion cells, and, in this way, account for most of the facts of human consciousness, and of the consciousness of animals other than man.

As it is our purpose here to understand social consciousness, we must first glance at the individual mind, and as this is a psychological matter, we shall treat it in a psychological manner. This treatment will of course exclude all conceptions of a purely metaphysical kind. Such conceptions are excluded from science in general. The economist, for example, takes no account of them whatever. The cotton crop of Texas may be said to depend upon rain. Many persons, of a metaphysical turn of mind, believe that the quantity of precipitation can be regulated by prayer. But the economist, in seeking to account for the movements of the cotton market, does not assume that the weather may be controlled by the prayers of the cotton raisers. He proceeds

without any regard to that hypothesis. The psychologist, in accounting for mental phenomena, does not consider theories which assume the existence of an immaterial soul. If such a soul exists, its existence is a very important fact. But psychology has not been used to prove that an immaterial soul has any reality.

The subject-matter of psychology is the brain and the nerves, with their functions. The brain of a highly developed animal — let us say a man — acts through the use of a countless number of cells which make up the cortex of the brain. It is not necessary here to enter into the minute anatomical or physiological details of cerebration. These details are to be found in the text-books of psychology, and are familiar to most readers who have studied that science, either in its literature or its laboratories. Suffice it to say that all mental stimuli come from without, directly or indirectly. Impressions are conveyed to the brain by tracts of nervous tissue called “afferent” nerves. Operations within the brain itself take place by means of certain movements among the ganglion cells, and this process is called intellection. Thus far psychology is certain enough of its ground. That which is most sought for by psychologists is a thorough comprehension of this ganglionic action. Psycho-physicists work on the assumption that all the obscure phenomena of mind could be explained if the cellular action of the brain were once completely understood. Many of the simpler operations of thought are easily accounted for in this way; and many of the more complex phenomena of the mind are found, upon closer examination, to be due alto-

gether to the same cause. Consciousness itself is held to be only the sum of ganglionic action, and while this view is not the popular one, nobody has been able to adduce a single fact in its contradiction.

In ordinary usage the phrase "rapidity of thought" is only a figure of speech. In reality thought is a comparatively slow process. The speed with which sensation travels along the nerves is not nearly so rapid as many other motions in nature. Recent experiments have fixed the speed of sensation at about 146 feet per second, whereas light travels at the inconceivable rate of about 186,000 miles per second, and energy of other kinds, such as gravitation, electricity, and other forms of force, act at immense distances almost instantaneously. A pin-prick on the finger will be felt in the brain much more quickly than a similar stimulus applied to the toe. If we conceive of a man having an arm 100 miles long, we can readily realize how very slow is nervous action when compared with electrical activity, for example. We thus see how very slow is nervous action in at least one of its aspects, and experiment has proved that the process of thought is subject to similar laws. As a matter of fact, experiment has proved that thought is nothing but nervous action highly compounded, and, indeed, no experiment is needed to show that the same brain will act faster at one time than at another, and that different brains have different degrees of rapidity in their functioning. This is proved by the effects of training and practice. A brain accustomed to mathematics will rapidly pass through profound and intricate thought quite difficult and tardy for a brain unaccustomed to action of this

kind. But if we consider the brain of any particular individual alone, it is evident that the rapidity of thought will depend altogether upon the speed with which the action of the various groups of cells is coördinated. So, if we fancy a brain with convolutions many miles in measurement, we can fancy that thought of every kind will be very slow indeed. Let us say that a gigantic brain like this should be engaged in some commonplace operation of mind; that its possessor were told to design a steamship.

In the first place, if the individual's body be imagined to be constructed on the same scale as his brain, an easily measurable time would elapse before the auditory apparatus could convey the sensation of sound to the organ of thought. Numerous ideas would simultaneously arise, producing thoughts concerned with steel, mechanics, mathematics, specific gravity, and other ideas constituting the mental image of a ship. These ideas could not be coördinated until nervous motion had passed along the various tracts of nervous matter connecting the various groups of cells involved; and we can imagine that many minutes, nay even hours, might elapse while the giant brain was forming the mental image of a ship — a process which seems to be instantaneous in a brain like our own. The small size of the human brain permits the very rapid formation of the idea of a ship after the stimulus has been applied to the membrane of the ear-drum; but this rapidity of conception is due to the small size of the human head and the proximity to one another of all of its organs of sensation and thought. If we fancy a microscopic man, in all respects the facsimile of ourselves, we must fancy

that his thought and his sensation would act proportionally faster than those of a man of our own stature.

From these considerations it should be plain that mental action, like physical or vital action, is purely mechanical. When we bear this in mind, much of the mystery associated with the process of thought is seen to vanish. We do not know the nature of nervous force; but it is none the less true that we *do* know the method by which nervous force acts; and in that method there is no mystery at all. We do not know many of the details of the method because psychologists have not yet demonstrated all the facts of consciousness, or understood all the various coördinations of the various groups of cells in the gray layer of the brain. But it is rational to assume that much will be learned in this respect, as much has already been learned in this and in other respects of nervous action. On the other hand, there is no rational ground for the assumption that the brain-cells of a man are moved by any force other than that found in nervous matter itself; or that human thought is essentially different from thought in the brain of other highly organized animals.

The operation of the individual mind, therefore, so far as any effort of science can demonstrate, is carried on by the activities of cells. Cells are the proper units of mental action, and the social mind must be found to be similar in principle; that is, its operations must be carried on by the activities of units, or instruments of action. These units, it should be clear, can be none other than the minds of individuals functioning together. When we regard social consciousness from this point of view, there will be no

mystery in it more than there is in the human mind itself. Sociologists, who reject the so-called mystical view of the social mind, are quite ready to accept the mystical view of the individual mind. All that these gentlemen accomplish, however, is to evade, by indirection, the plain, blunt question of an immaterial soul. They do not hesitate to reject the idea of a social soul of that kind because popular opinion is at one with themselves in this matter. But popular opinion very positively accepts the notion of an immaterial mind in the individual, and hence these evasive sociologists bow to the common belief and conciliate it by tacitly assuming that the individual consciousness is different in principle from the social consciousness. By doing this they serve a double purpose; they save their faces from popular attack, and at the same time they conserve their reputations as "medicine men" of profound and extraordinary wisdom.

As a matter of fact the only misconception as to the nature of the social mind lies with the evasive sociologists themselves, who are afraid to treat the question as true psychology treats the question of individual intellection. The common man has no false ideas at all in his conception of the social mind. He looks upon it as the united mental action of the men making up an organized group. And men generally accept the fact of social consciousness as self-evident. There is no mystery for the uncultured man in the ordinary operations of the social mind. It is only when he considers his *own* mind that he finds himself perplexed.

The uncultured person sees mystery in the phenomena of his own consciousness simply because he

does not understand the action going on in his brain. He knows nothing of cellular physiology, or of ganglionic structure, more than a savage knows of the structure and function of a compound steam engine; and the work of the brain is as mysterious to him as that of the steam engine is to the savage. But even the plainest of uncultured men can understand how several or many other men can be informed one by one, or all together, of a fact they did not know before. To suggest that there was anything mystic or supernatural in *that* process would be an insult to the meanest of intellects. Being himself one of the units of the social mind, he can understand the motive of its simpler operations, because he can understand how the units act together.

Yet when we consider the more profound and complex operations of the social mind, these become very obscure to all but a few intellects. And if, these few understand them, it is only because they understand how the simpler operations are compounded together and issue in operations of a more complex character. If the trained psychologist understands the simple and compound motions of his own consciousness, it is only because he knows, in large measure at least, how the units of his consciousness act; and when the action of each of its own units is understood by the social mind, there will be no mystery there.

It will be perfectly rational to assume that motion is communicated from one ganglion cell to another by contact. It is by contact of one kind or another that motion is distributed among molecules. We may not as yet be competent to describe the kind of contact or the intimate method by which ganglion

cells act. Microscopes may never be able to show the medium through which cells are attracted one to another. No more may telescopes be adequate to show the substance through which light, or gravitation, or actinic force acts. But we must assume that there *is* a medium, and a material medium, by which contact is encompassed by cells, as we assume a medium for the action of light, or of any other force in nature.

Let us fancy a giant eye to be looking through a giant microscope at the motions of a body of men. Let us suppose that the object examined be an army passing through the manoeuvres of a general drill upon an open plain. The giant eye would see the most complex and yet seemingly regular motions, involving certain groups of the men at times, and certain other groups at times. Again, the entire army would pass through evolutions now rapid and now slow. The giant eye would see one man very distinctly influencing the action of other men, and numbers of men influencing the action of others with comparatively enormous distances between them. Yet this giant eye could not perceive the interlocking medium of air and the minute instruments of speech and sign used by the microscopic men in their intercommunication. The general action would seem not unlike that of the nerve-cells of a fish as we see them under a microscope. But would the giant observer be justified did he assume that his men communicated with one another by some supernatural method? If he were a rational being, and not a mystic, he would of a certainty assume that the rapidly moving objects he was examining communicated with one another by means of some material

medium which his giant eye could not discover. If the mind of the army be a social mind, — and it is such, in truth, — it would seem to act by essentially the same method as that observed in the cellular movements of the human brain, and there is no more mystery in the one than in the other.

It is unanimity of action among individual men that constitutes the social mind. There could be no social mind in a group of men each of whom was impelled by motives different from those of the others. There could be no “public opinion” upon any question upon which no two individuals could agree. Nor could there arise an individual consciousness from the incoördinated action of brain-cells, even if we were to permit ourselves to fancy a brain in which coördination of some kind did not exist. If we conceive the social mind to be no more than the sum of the action of individuals acting coördinately together, we shall have a conception precisely similar to that of the psychologist when he deals with the consciousness of a human being or of any other animal. The one conception is quite as free from mysticism or superstition as is the other, and if we accept them both, we are only eliminating the mystic and supernatural from the operations of the individual as well as of the social consciousness of man.

Having thus laid down the rational basis upon which we are to deal with collective, or social, mental phenomena, we can now proceed with the treatment itself.

Social consciousness will be vivid, clear, faint, or obscure according to the efficiency of the means and methods by which individuals communicate with one

another, and by which one or many communicate with some or with all. In primitive societies the only means by which information is passed about is the simplest form of language. Language is of two kinds, that of speech and that of signs. The language of signs is much older than that of speech. But with men, vocal language and sign language are always found together, and develop together in a growing society.

This growth and development of language springs directly out of the cumulating environment multiplying in a fixed place. For it will easily be seen how new varieties of things will require new names, and how new words will be required to express the complex relations of the new things to one another, and the consequent complex relations of ideas. Anthropology informs us how rude picture writing has evolved into our present written language, while philology explains the growth of true language—that is, language vocally used. A community, therefore, which has developed the most complex environment will have the most complex means and methods of communication, vocal and instrumental. Intricate as was the language of the Greeks, with all its philosophical and metaphysical words, it is simplicity itself when compared with modern English, in which are found words denoting a thousand varieties of things and of thoughts which had no existence for the Greeks.

On the character of the environment will depend, too, the ease with which intelligence is passed about among men. Let us compare, for example, the instruments of communication possessed by an an-

cient and a modern community. It is desired, let us say, to acquaint the people of New York with a fact of general importance. Not more than an hour will be required to make the community familiar with the desired knowledge. The telephone, the telegraph, the newspaper, and the railroad are the instruments by which the knowledge will be rapidly passed about. If it were so desired, intelligence could be disseminated in so thorough a manner that almost every inhabitant of New York, as well as the people of every other large American city, would be made acquainted with the news in a single hour or less. Within an hour after the assassination of President McKinley, the tragedy was generally known in all the large American cities; and within a few hours almost every American citizen, in town and country alike, was informed of the fact. But in ancient Rome this quick intelligencing would have been impossible, and this, too, in spite of the fact that the territory to be covered was comparatively insignificant, and the number of persons to be informed comparatively small. If we extend the illustration to the confines of the British and the Roman empires, its effect will be heightened, as in the case of the United States. Twenty-four hours after the assassination of President McKinley the entire civilized world had been informed of the occurrence. If the same was not true of the death of Julius Cæsar, it was only because ancient peoples lacked the efficient instruments of communication possessed by the world to-day. The clarity and the quantity of social consciousness are hence seen to be determined by the variety and quantity of the things constituting the wealth of the social body. Thus it

is a fact that millions of people in China are yet unaware that China has passed through two important wars in the past few years. There are no railroads, telegraphs, telephones, or newspapers in general use among the Chinese.

These are very simple truths, and there would be no need to point them out were it not for the highly important conclusions flowing from them. Methods of communication assume a new interest when we remember that they are distinct helps to the equable diffusion of wealth. Efficient instruments of communication broaden and deepen the flow of social forces toward economic equality, and are themselves assisted and improved by the progressive diffusion of wealth. The one process reacts upon the other. Efficient instruments of production and exchange are found to be excellent tools for the passing about of intelligence. The locomotive steam engine, used primarily for transportation, was discovered to be a most useful instrument of communication. But the locomotive proved to be much more than either or both of these things. This invention was the direct cause of an enormous increase in capital, and in other kinds of wealth having only an indirect relation to transportation and communication.

Again, the simple invention of movable printing type — the most important instrument of communication we have — has caused the creation of priceless quantities of capital and wealth not directly connected with the art of printing. This discovery, when united with that of applied steam, has borne fruit in the creation of coördinate industries of incalculable value to men. The electric telegraph and telephone,

second in importance to printing, have vastly increased the productive power of society, adding at once to the quantity and variety of wealth, and indirectly stimulating invention in other branches of electric art and science.

But what is the nature of these inventions? Are they not all of them purely capitalistic? And what is their effect upon social growth? Is it not precisely that which we have described in our discussion of social kinetics? All of them primarily contribute to the constant increase of wealth, not only in the industry arising directly from the inventions themselves, but in all other industries as well. The telegraph, the steamship, the railroad, the printing-press, intimately connect the producer of wheat on the margin of cultivation with the consumer of wheat at the centre of utilization; and this power of quick intelligencing reacts again over other and more remote areas of industry to the farthest borders of civilization and even beyond them.

Methods of communication have therefore a two-fold effect upon the body social. While they serve to increase the quantity of wealth, they also serve to assist in its progressive diffusion. And if this be true, it must follow that these same methods help the process of capitalization we have described in the preceding chapter. It is to its superior instruments of communication that the United States owes its rapid coalition of capital into "trusts" and combinations. The instruments, of course, existed long before they were used for this purpose. The telegraph and the railroad naturally preceded the "trust"; and it might have been that nobody had thought of using

them in this way. So, too, Guttenberg might never have thought of the movable printing type. But it is clear that the "trust" method of capitalization could never have been practised without the telegraph, the postal service, and the railroad. The idea might have suggested itself to many minds, and probably did. We find the beginning of industrial combination in ancient history; but modern American methods of capital could never have become concrete fact were it not for modern American methods of communication.

The great social effect of the tools of intelligencing will be found in all other processes of social life at which we have glanced in the preceding pages. Methods of communication profoundly affect all social motion. That effect is seen in labor as well as in capital. Labor-unionism flourishes most in trades which bring the workers into close proximity to one another. And if unionism is now generally practised, it is only because laborers use the instruments freely. Through the press and the telegraph, and through quick personal travel, it is easy quickly to secure united action in an entire trade composed of large and widely separated bodies of workers. The same unanimity of action is denied to trades in which the individual workers are widely separated from one another, as in the farming industry. Farm laborers cannot socialize their work, just as farmers themselves cannot socialize their capital; and this is true because farmers and their laborers, owing to the highly discrete character of their habitations, cannot use the new instruments of communication with the same effect as can manufacturers and tradesmen. Yet the

farmer has not been insensible to the benefits of the compound method of capitalization.

Agricultural capitalists, in America at least, are wide awake to the advantages of industrial combination. They have tried various ways of doing what other capitalists have done in this respect. They have failed because of the scattered character of their habitations — a condition thus far due to the extensive character of land. Manufacturers and circulators of commodities can compound their capital by the use of the stock share, the railroad, the telegraph, and the postal service. These methods excellently serve the purpose of labor and capital in other industries. Finding themselves prevented from using the new method in a private way, agriculturists have persistently demanded that the government shall use its power to enable them to do so. They do not demand that the government shall take over their land and operate it; but they ask that government shall control the product of the land by purchasing it outright when it is offered. That is to say, they deem it advantageous to themselves that the government shall act as a capitalist in all that part of agriculture not pertaining to production.

The motive of the farmer should be very manifest. He desires to retain all his own liberty in production, and to restrict the liberty of all others in the exchange of the things he creates. He cannot himself circulate his commodity. If he allows others to do so, he is at the mercy of competition in his own product, and at the mercy of combination in all products save his own. He is, indeed, at the mercy of a twofold competition and of a twofold combination. Capitalists and workers in

other industries buy the product of the farm in an open market where competition rules supreme. The farmer himself buys in a closed market in which capitalists and workers are alike protected by combination. He has convinced himself that combination is the only method whereby he can be enriched. But he finds that he cannot practise combination in a private way by any method he can think of. Hence he demands that he be given the benefit of the only other method he can think of, and that is the method of government ownership.

All that is needed for the successful combination of farming capital is an efficient system of communication, which would place in the hands of the farming classes the power of organization now held alike by capital and labor in other branches of industry. If such a system were discovered, the farmer would quickly withdraw his demand for government interference in the sale of his product. He would then demand that government leave him alone, just as do the "trust" capitalists now. But in that event we should see the demand for government interference quickly shifting to all other classes of capitalists and producers. For if the farmer is at a disadvantage now, the rest of society would be at a greater disadvantage then. The farmer is aggrieved because he is forced to buy his manufactured goods in a market closed to competition. How would other producers feel if they were forced to buy their food in a market controlled by the farmer? When competition would vanish from a market at the very source of life itself, what power but the power of government could ease the situation? And *how*

could it ease that situation except by becoming a capitalist itself?

The true relation of government and capital would here force themselves on the minds of all. The farmer could not excuse a forced rise in prices as does the manufacturing capitalist at present. The farmer can never plead poverty, economy in production, or threatened failure in business, even though he were infinitely poorer than his congener, the manufacturer. He can always produce enough to sustain his own life and that of his help. He can never plead deterioration of his plant, or advance the argument that he must close his plant if he does not raise prices. For his capital, or the most important part of it, is indestructible, and gains rather than loses by temporary disuse. The farmer has no impelling motive for producing great quantities of wealth because food is perishable, and over-production of food is mere waste of wealth and labor, and of benefit to nobody.

The very heart of the farmer's grievance lies in the fact that he is unable to use the instruments of communication for the purpose of compounding his capital. He sees that other industries can and do use them freely. He himself uses them for every purpose save that which he most desires. And if his moral sense revolts against this apparent injustice, it is only what should be expected in the circumstances. Farmers love luxury as much as do other people. They desire to get rich as quickly as they can. They have found that their desires are thwarted in some way they do not clearly understand. Therefore they demand that government shall help them, and, it must be said, there is not the slightest super-

stitution in their view of the power of government in this respect. They do not expect that government can create wealth by *ipse dixit*; all they seek is to use their power as rulers to force the rest of the people to give larger quantities of wealth in exchange for agricultural products—and this can be done the very moment that government uses its taxing power for that purpose. The very force of circumstances is thus seen to make of the farmer a statesman of extraordinary clearness of perception.

When we look at other aspects of industry, the importance of instruments of communication is seen to be prime. We have already observed how these things are capitalistic in their nature; how their primary purpose is the creation, the circulation, or the accumulation of wealth; how the use to which they are put is always concerned first of all with the economic welfare of the individuals who own them, and secondly with the welfare of the many who use them. The economic life of the individual is hence seen to be the bottom motive in all inventions and industries of this kind. But an important effect follows upon the spread of these industries. Industries which help the systematic diffusion of intelligence also serve to lessen crime. It is a noteworthy fact that material and moral progress are always found together. In brilliantly illuminated cities the burglar and the highwayman find less opportunity for work than in cities poorly illuminated. The daily newspaper, primarily used for the enrichment of the proprietor, is discovered to be an important instrument for the palliation of public and private wrong. To the telegraph and the railroad may be directly ascribed the decline

of brigandage. Further examples of this general law of moral progress will quickly suggest themselves to the reader.

Let us see how economic and moral progress is furthered by the daily newspaper. The journalist-proprietor himself may be highly immoral privately. He may be a thief, a corrupt politician, a man whose private desires may be in direct conflict with the public good. But if his first desire be the possession of wealth he must, perforce, use his capital for the spread of knowledge which leads to the correction of public wrongs. Practical experience teaches him the truth of the old economic proverb that the good of all is the good of each. He cannot suppress news of public wrongs if his journal is to have a profitable circulation. The public cares little for the private character of a producer so long as the product supplies a want. News of political abuses cannot be suppressed by one publication so long as such news is printed by other publications of like kind. If it is published by one, it must be published by all on pain of economic distress. Thus the motive of all daily newspapers is a compound one. The primary motive is the enrichment of the owner; the secondary motive, arising from and limiting the primary, is the public good.

If power of any kind is sought by the owner of a daily newspaper, he can acquire that power and retain it only by conduct which at once enriches himself and conserves the public good. He cannot enlarge his wealth without promoting the common welfare. His political influence will depend upon the popularity of his journal. And this popularity is itself dependent

upon the freedom with which the journal supplies its readers with news conserving the public good. The so-called "policies" of newspapers have nothing to do with public morality. Policy is generally made to fit the circulation. Preaching from an editorial chair is chiefly a form of cant which has very little effect upon the public mind. When editorial opinions conform with popular opinions, they are approved. It is popular opinion that moulds editorial opinion—not the reverse, as some deluded journalists imagine. When editorial opinion goes counter to popular opinion, the circulation falls. The moral codes of newspapers are an effect, not a cause, of social progress. How true is this assertion we can see when we try to imagine the economic disaster overtaking that journal which would advocate the robbery of the people by their public servants. The editor might privately assist in such robbery, but he would be forced publicly to condemn it, or he would lose his circulation, his wealth, and his influence together.

Thus it is seen that the daily newspaper—the most efficient instrument of communication in advanced communities—is at the same time the most potent instrument for the correction of public wrong; and that this fact is entirely due to the selfish desires of men for wealth and for power of other kinds. But the daily newspaper is more than this: it serves to increase material prosperity, to accelerate trade, to promote public taste in art, and quickly to disseminate scientific knowledge in a manner possible to no other instrument of communication. The taste and the knowledge it disseminates may not be of the most highly æsthetic or scientific quality; but there can be

no question as to its quantity. If newspapers have not the accuracy of the text-book in matters of science, it is only because journalists are not universal sciolists. But the tendency in this respect is upwards. Accuracy in scientific news is more in demand than ever before. In America, especially, great care is taken to publish correct accounts of important inventions and discoveries in the mechanical arts. Scientific matters in general are not so accurately reported, but the movement here is also upward. For there is a growing disposition among scientific men to discuss profound questions in the daily press. This change in disposition is due to the general spread of scientific knowledge, produced, in large part, by the daily paper itself.

Popular interest in scientific matters must always be measured by the law of moral proximation. If the question is one of life, health, or wealth, popular interest in it will be strong. In the treatment of all such facts the effort of the daily paper is to secure as accurate and as complete information as possible. Thus the general public in America possesses a profound knowledge of hygiene and disease. Americans are more widely familiar with the causes of disease and its remedies than the public of any other country in the world. The germ theory, and the experiments going forward in the laboratories, are familiar to everybody who reads the newspapers. Americans, in the mass, are more familiar with the labors of European bacterialists than are the masses of Europeans themselves. Every important discovery in pathology and surgery is at once cabled to the United States, and is widely known and discussed on the

same day, or the day after the announcement of it is made in Europe. The majority of Americans do not understand the scientific methods by which the discoveries are made. But the very rapid spread of the news of the results proves the quantity and the quality of American instruments of communication. Millions of people in towns and villages, remote from the great cities, are enlightened within a few hours of an important scientific discovery made in Europe, while as yet the majority of Europeans are in ignorance of the discovery, and even of the name of the science by which it has been accomplished.

The American newspaper is frequently the object of European journalistic contempt, just as European railroads and telegraphs are objects of Chinese contempt—and for the selfsame reason. But the American newspaper is an instrument of education compared with which the European newspaper is contemptuously insignificant. Of European countries England alone has a newspaper press comparable even remotely with that of America, either in freedom or in educational capacity. England possesses superior technical journals, but these are not read by the masses, and we are here concerned with the diffusion and not the origination of scientific knowledge. The American daily papers copy freely from British technical journals, and technical news is frequently cabled to America. The general intelligence of the two countries can best be gauged by a comparison of their daily press. The American newspaper is an intellectual puzzle to the British journalist. He cannot understand it because there is no demand among his own people for an intellectual product of that kind.

Experiments made in England to publish a daily paper with the American methods have all been failures, and must continue to be failures until British intelligence demands a product like that which sells freely in the United States.

But a comparison between the newspapers of the two countries will not only show that Americans are more widely informed in science than are Britons. It will also show that they are more moral. Newspapers reflect the moral as well as the intellectual capacity of their readers. The Briton who is amazed at the free publication of criminal news in American journals, should remember that his transatlantic cousins are more deeply interested than are Britons in crime of every kind. And so far from this being an indictment of the moral sense of Americans, it is really the reverse. A most heinous murder in the poor quarters of London, or the dead body of a man or woman (of the slums) found in the Thames, has small concern for the general British public. Little notice of it is taken by the daily press; whereas in America an event like these is chronicled fully and is read and discussed with avidity by the public. Why? Because Americans have a lower moral "tone" than Britons? Hardly.

In America the life of a man, whether he be rich or poor, is a matter of the highest importance. When grievous wrong has been done to any individual, the public wants to know of it. The people wish to find out all the details, but not because the public is morbidly curious, — for it is not. They are interested in the lives of their fellow-men, because life, with them, is sacred, whether it pertains to a high or a lowly per-

sonality. In America all men are politically equal and potentially rich. Whereas in England the life of a common man is not so sacred as that of a lord, and the life and person of the monarch are more sacred than those of any of his subjects. The gravity of the wrong, and not the personality of the wronged individual, is the primary factor in the moral judgments of Americans. In England a prince may do violence to the person of a common man, and escape with no punishment even if the individual wronged can secure legal process. The British public is disposed to make light of such a matter. But an atrocity of this kind would be punished in the United States as it deserved. No political office-holder could so disregard the rights of his fellow-men without swift and sure retribution, legal as well as social, if the outraged person desired to prosecute the offender. It is hence seen that when Americans are interested in the details of crime, that fact is not so much due to a "low moral tone" as to a delicate appreciation of the rights of all men whatever be their wealth or station; and this appreciation does not seem to be the general rule in the most enlightened, richest, and freest country of Europe.

It is to satisfy this purely moral want that American newspapers freely publish the details of criminal news. To fill it newspaper agents frequently assume the detective function of the police in a way which often embarrasses the work of that branch of government. Yet it must be admitted that the publication of criminal news secures the arrest of the evil-doer more often than it enables him to escape. That publication is often of material assistance to the

police, who are themselves careful readers of criminal news.

From the foregoing facts we are warranted in the conclusion that the daily newspaper, in America, has been the means of developing and clarifying social consciousness in a high degree. It is this superior social consciousness which gives the American a power of self-government that seems to puzzle the most eminent scholars of Europe. The average American—even of foreign birth—has motives for self-government quite unknown to the average European. Having more to lose, and more to gain, he has acquired habits of self-restraint far beyond the conception of his poorer fellow in Europe. This fact is illustrated by statistics of alcohol in America and elsewhere. England, with a population half the size of the United States, consumes three times as much alcohol as do the people of the republic. The kingdom has three times the drunkenness of the republic and only half the population. These quantities are not relative. They are absolute. Thirty million people in England consume three times as much strong drink as do seventy million people in the States!

European historians have always been disposed to discuss the political equality of America as a "fool's dream." Americans have not been quite able to see the force of the comment. With this political equality they have managed to grow into the richest people of the earth. In this dream of theirs they have outstripped the world in industry. They have built up a system of economy which, while it pays to its workers the highest of wages, sets down its products

in the markets of monarchies at prices which elude the productive capacity of monarchic capitalists. They have a system of free education which England has not even approached. They are driving the statesmen of monarchic countries to expedients in government that are no less than expressions of blank despair; and after a century of history this political equality, which was a "fool's dream" one hundred years ago and less, is found to be the most vivid reality in the world. If European scholars are waiting for the downfall of a political and economic system like this, the best that can be said of them is that they are afflicted with a superstition arising out of their environment. A more cautious inquiry into political causes will probably serve to clear up their doubts.

But let us return to the question of strong drink. Drunkenness is highly repugnant to the mind of the average American. For him it is one of the most immoral of sins. Is this true of the British mind? In America the common table beverage is water, while in England it is beer. The British bar-maid is something the average American cannot understand. To him the idea is abhorrent; while, to the Briton, it is natural and just. It may be argued by the Englishman that there is really nothing wrong in this social custom; that it is not wrong for a young woman to dispense liquor in a public place to men in the act of becoming drunk; and it may be argued further that this institution does not disclose a low "moral tone" in the entire community. The Englishman may go farther; he may say that the tap-room filled with drunken women of the poorer classes

— not sexually vicious women at all, but “honest” women, with children — is a thing which is really of no moral consequence. The Englishman may hold to all these views; in which case we can only say that his notions of morality are very different from those of the average American. But if he repudiates this view of things; if he holds that such practices are truly immoral, then he must admit that as these things are entirely absent from the social life of the United States, and, to Americans, are the objects of utmost abhorrence, the general “moral tone” in America is higher than in England.

The moral ideas of Americans concerning alcohol are unique in Christendom. The most bitter prejudices prevail against many public men simply because they are not fanatical prohibitionists. In many of the states the manufacture and sale of alcoholic beverages is forbidden by law under severe punishment, and great tracts of country and city in other states are under severe prohibitive restriction. In many of the larger cities dram-shops are forbidden within radial districts of schools, churches, and public parks. And in country places no man can be elected to a high position if he is connected with the liquor industry, or is generally known freely to indulge himself in strong drink. So powerful is this public sentiment against drunkenness in America, that the foreigner visiting the country is constantly met with fretful circumstances which seem to him to be the product of a rampant spirit of puritanism.

But this spirit does not pertain to strong drink alone. It pertains, too, to the use of tobacco. With the exception of two or three Christian creeds,

clergymen may not use tobacco and remain free from moral reprobation; and these clergymen all belong to creeds adhered to by the richest and the middling rich classes. The Catholics, the Episcopalians, and the Evangelical Lutherans in America, among whom the clergy are allowed the use of tobacco and strong drink, are, on the whole, the poorest religious classes in the United States. There is one form of tobacco alike condemned by users and non-users. That is tobacco made into cigarettes. The practice of smoking cigarettes is regarded with contempt by everybody, even by cigarette smokers themselves, and is regarded as positively wicked by a large majority of the people. When one remembers that these unique moral ideas concerning alcohol and tobacco are held by the richest and most prosperous, and possibly the freest people in the world, we submit that they are significant.

The clarity and continuity of social consciousness in America can be traced to no cause other than the large quantity and the high efficiency of the instruments of communication in use in that country. Ideas of any kind could not be so rapidly and clearly propagated without such instruments; and this assertion will hardly need any demonstration other than the statement of it. Very vivid and very clear ideas can exist in any community; but the rapidity with which they can be spread about will depend altogether on the efficiency of the things used for intelligencing, and the extent to which they are generally applied. It is true also that moral ideas are *caused*, at least in some degree, by the facility with which intelligence is passed about among men. Some repetition may be made here with profit.

In Chapters VII and VIII we noted that the peculiar moral characters of the people of the American republic were produced by the general diffusion of wealth in that community. As a citizen grows rich he grows moral also. Having many rights which he desires shall be respected, it is to his interest to see that similar rights of others are as well protected as his own. Thus he is found ranged on the side of law and order, and his valuation of honesty and morality is correspondingly high. If Americans are more moral than Europeans, it is therefore because they are richer. But general morality depends upon general diffusion of wealth; and if diffusion is helped by efficient methods of communication, then these methods are themselves a cause of moral progress. We can illustrate this law by a simple example. Let us suppose that petroleum be discovered over a large area of country. With quick methods of communication, the whole community is apprised of the discovery in a very short time. Numbers of individuals are made richer immediately. There is new demand for labor in the oil fields, and in the refining of the crude oil. Railroad traffic is increased, new quantities of rolling stock are in demand, and the industries of lumber, of mining, of steel, of car building, are very appreciably enlivened. In addition to all this, the community at once divides the benefit of an immediate decline in the prices of consumable oil. Here are distinct effects of quick intelligencing upon the creation and diffusion of wealth. Let us now look at the same fact from the historical point of view.

The politico-moral code of the United States was,

in the beginning of the nation's life, the product of the industrial development of Europe, and especially of England. The colonies had derived their moral notions of property from the mother country, but these notions had been considerably modified by the new and the freer environment. Unlimited quantities of land had served to equalize political rights and the moral ideas associated with them. This freedom of ownership in land lessened the importance of nobility which, in England, was chiefly grounded upon large holdings in land. The newly rich landowner in the colonies would hence be a more important personage than the impoverished nobleman. He would also be the equal of the rich nobleman, for nobility was not an organically familiar fact in the new country. But this levelling of rank would soon end in the almost total disappearance of nobility; and the idea would become repugnant to Americans; for they would readily perceive that while their potential equality might enable them to become rich, it could never enable them to become noble.

In forming their political code, therefore, they eliminated from it nobility of every kind, as well as the royal power from which it depends. The idea was not repugnant to all of the citizens; it was abhorred only by the great majority. The few could not conceive of any plan which would confer equal opportunity of rising to nobility upon all of the people. And it was obvious that such equal opportunity could not be given to one class of citizens only; for what class or classes were to be preferred, and what classes excluded? The result was that the framers of the government were forced to give every

free citizen a perfectly equal share in the political management of the state, or a right to that share if he desired to take it. The colonials did not abolish sovereignty. By no means. They magnified it, reinforced it, and made it perpetually irremovable, indestructible, and absolute, by making every citizen a sovereign power in himself. In fact, the colonials could do nothing else. Sovereignty is a divisible thing. It can be assumed by one or several or many if they have the power to appropriate it; and as all citizens were co-powerful, action could only issue in a perfectly equal division of the thing most desired by all. A similar issue is now emerging from the economic progress of the republic. (If we substitute the term "social capital" for "political power," we shall see our way clear to the details of the method by which the product of social effort must be equally divided among producers. The reader can work this matter out for himself. We are here concerned with social consciousness.)

The rapid industrial growth of the United States, since the war of emancipation, has been the cause of moral development producing a wide divergence between the American republic and the countries of Europe. The character of the state has not changed because the diffusion of political power is complete. Every citizen is the actual political equal of the others. Each is co-sovereign with all, and potential equality for distinction is also perfectly equal. But if the substantial government can never be changed, the *method* by which the citizen uses his power can be changed in important respects. At present the citizen elects a representative who acts for him in codify-

ing and enforcing the popular will. But why was this system adopted by the people? It was of a certainty *not* adopted for any *political* reason conceivable. The American citizen of a century ago was quite capable of voting for or against any law he desired to pass for the regulation of his own life. Why then did he see fit to delegate his power to a representative?

The answer is obvious. It was an economic and not a political motive that moved him. The people could not assemble in parliament together. There were no means by which all the citizens could vote upon questions of legislation. Even the election of representatives was a slow and painful process. Instruments of communication were few, and such as did exist were insufficient. But with easily available instruments of this kind there could be no conceivable reason why the citizen should surrender his power into the hands of another man. Could he himself exercise his sovereign power by voting in his proper person, thereby assuring himself that his sovereign will would be recorded on the statute-books of the nation, he could not possibly refrain from exercising his power in this way if he exercised it at all. With sufficient and efficient means of communication there could be no longer any conceivable need for representative legislation, or adjudication, and these methods of enforcing popular will would vanish.¹

¹ In political science a distinction is drawn between the state and the government. The state may be democratic while the government is aristocratic or monarchic; or the state may be monarchic or aristocratic while the government is aristocrat, or even democratic. But the government is always the creature and servant of the state. In a

Royal power has constantly declined in the past. The power of the representative is rapidly declining in the present. The growth of the daily newspaper in America has been the cause of a remarkable curtailment of the power of the representative legislator. The citizen, alive and alert to public questions through the perusal of the news spread daily before him, uses the mails and telegraph to keep in touch with his representative at the capital, and important matters are thus decided frequently and positively. The administration at Washington was opposed to the late war with Spain. Many of the representatives were opposed to it. But popular pressure was so extreme that Congress was forced to declare war, and the president was forced to pursue it. Lincoln's call for volunteers came as a surprise to the country. McKinley called for volunteers because the country told him to do so.

All these facts have a moral significance, but their roots lie in the wealth of the nation and in the comparatively high degree in which that wealth is diffused. If we do not find similar facts in the most progressive community of Europe, it is only because

perfectly equilibrated group, having economic and political equality of the kind we have assumed to be the end of social motion, this distinction would vanish. For the state would consist of all the people, and a large majority of the people would make up the mechanism of government itself. The minority, in their economic life, would be above the state; for the economic power of the state would be surrendered into their hands. The distinction at present drawn between state and government is, therefore, a recognition of the actual facts of past and present stages in social evolution. But such distinction cannot be made in a pure theory of social life which deals with ideal quantities rather than with concrete things.

that community is comparatively undeveloped. The average Briton is not as rich, and hence not as moral, as intellectual, and as free as is the average American. The instruments of communication at his command are less numerous, less efficient, and less accessible than those in the new country. If the citizen of England could command the same power of wealth and communication as his American cousin, he would be as moral, as intelligent, and as free as the latter; and this truth passes from theory into fact when the poor Englishman becomes a naturalized citizen of the United States. His capacity for the use of his new-found wealth grows rapidly with possession. And this fact would seem to account for the facility with which America absorbs Europeans of every country and of every class, and quickly converts them into active, intelligent, and useful citizens.

These forces react profoundly upon the relations of government to capital. The effect is seen in the state of American public opinion discussed at length in the three preceding chapters. It is not necessary here again to go over the same ground. We need only note that to the *causes* of social progress we have already developed we can add the cause that is found in methods and instruments of communication. The flow of social forces toward economic equality draws into itself this confluent force which lifts society to higher and higher levels of self-consciousness. All forces which cannot thus be compounded with social motion must be eliminated by natural selection. We cannot imagine them as surviving, and at the same time imagine that social progress will go forward. If they are conceived to survive,

we must alter our definitions of social progress itself, and definitions now accepted as self-evident at once become self-contradictory.

At the present point in our discussion it is needful to consider another important effect upon social growth wrought out by instruments and methods of communication. This effect is the multiplex phenomenon of *sympathy*. It is a fact of common note that the more of suffering one beholds, the more indifferent he is to the fact. The surgeon, the nurse, and the soldier are proverbially unmoved, at least comparatively unmoved, by the sight of suffering in their fellow-men. The butcher is less concerned with questions of cruelty to dumb brutes than is the person who does not earn a livelihood in the shambles. Coal-miners are always objects of sympathy for those who do not reside near the mines. Those who have the profoundest pity for victims of pain of every kind are the very ones who are least accustomed to behold pain of any kind.

This commonplace truth will assume, perhaps, a new significance when we associate it with the effects of social motion as implied in our law of capitalization. It will be clear that wealth and its diffusion progressively lessen the quantity of pain endured by a growing social group. A wealthy community suffers less than a poor community, and hence its sympathies are profounder, more delicate, and more varied than those of the group in which poverty and pain are familiar things. A reform effected by sympathy is the most thorough reform imaginable, and if the current of sympathy flow strong and deep, the reform will be permanent and assured.

But it is plain that sympathy cannot act if the sympathetic public have no knowledge of the pain suffered. And this public knowledge can only be secured by efficient and sufficient instruments of communication. An evil may long exist in any community, and successfully resist correction if social consciousness is not constantly held alive to the need of action. Action will not be taken unless sufficient force be brought to bear simultaneously on sufficient numbers. Individual effort, or mere personal appeal, cannot sustain this simultaneous opinion unless the individuals appealed to have a strong personal motive to act for their own immediate good. But general and simultaneous appeal to the society cannot be resisted if the stimulus be constantly applied.

Let it be desired, for example, to correct an abuse of capitalist power, say in the employment of child labor. In a rich community the motive for action in the majority of the people will be purely sympathetic. That is to say, the abuse is remote from the persons of those appealed to. The children of the majority are not required to labor for a living. The sympathy of poor parents is blunted by poverty; or, rather, sympathy has not been developed in them by the possession of wealth. The antipathy of the majority to child labor is very strong; but the majority cannot act if it be not reminded of the need of action and by sustained application of the reminders. For this purpose the printing-press is the most efficient instrument to-day, and the daily newspaper is the most efficient form of the printing-press. Child labor could not long exist in any prosperous community the literature of which would quickly expose every wrong done by

the capitalist in this respect, and would continue to expose the wrong as long as it prevailed.

We do not mean that public sympathy can be *created* by the press. This follows by no means. The press, however free, could never convert the surgeon into a sympathetic man, no matter how much the surgeon might read. Neither can the press create delicate feelings of pity in the mind of the person accustomed to squalor and want and the pain they cause. To make the pauper capable of sympathy, you must first remove him from pauperism. And to make the capitalist sympathize with his employees, you must first remove the painful circumstances in which he is accustomed to live.

This can never be done by the pitiless themselves. It can never be done by the sympathetic public if that public remain unenlightened as to the facts. But if the source of the enlightenment be constantly active, sympathy must respond by a law of moral mechanics. Once that child labor be abolished in this way, it can never again be reinstituted as long as the press stimulates action by exposing every lapse the moment the lapse occurs.

By these considerations we are drawn to the conclusion that with growing wealth the moral consciousness of society extends over larger areas progressively. The moral code of the developing group constantly multiplies the conduct it defines as wrong. New circumstances create new definitions of morality, and that which was right yesterday becomes wrong today. Negative good becomes positive evil. If the social mind be constantly alive to the fact that pain exists for some, the social mind cannot be at peace

until that pain is removed. The stimulus to social consciousness is the efficient and sufficient instrument of communication. This complex of social force issues in social motion called reform. And as social motion has directly to do with the quantity and the diffusion of wealth, it is seen that the relations of government and capital are interlocked with the sympathies of the individual, and with the means whereby these sympathies are made quickly and organically social.

From the analysis we have here made of social consciousness, the reader will have inferred the mechanical nature of the process. The purely mechanical character of individual consciousness has been demonstrated by psychology. The brain is as much a mechanism as are the heart, the lungs, the intestines, and the eye. The man who carefully watches the operations of his own mind will find that many of them are unconscious. He will often suddenly awaken to the fact that he has been thinking "unawares," just as he often observes that he winds his watch, attends to the work of his toilet, reads a page or two of a book, or drums upon the table with his fingers, without present consciousness of these acts. The mechanical nature of the simpler operations of the social mind is even more manifest still. The motions of a regiment of soldiers are more evidently like those of a machine than are the actions of an individual man. Yet the man is as much a machine as is the regiment.

But the structure of a man — complex as it may be — is not nearly so intricate as that of a highly civilized society. Any single organ of a society —

such as the army, the legislature, the market, the factory—is seen to be mechanical at a glance. Structure and function are here alike comparatively simple. But the matter becomes more difficult when we look at the structure and the functioning of the whole society together. The interdependent workings of all the varied parts of a social body present a highly complicated problem.

It is not difficult, for example, to understand the organization and the operation of a steel factory. But when we try to think of all the industries connoted by a steel factory ; when we include within the conception such industries as mining and mining machinery, and their cognate and implied industries ; of the factories and industries which furnish food and clothing to the workmen, build their homes and supply their household furniture ; when we include the railroad and its confluent industrial tributaries, we open up the sciences of economics and mechanics, of geology and botany, of chemistry and psychology, of mathematics and physics, of biology and technology, as well as the arts to which these sciences are applied. And as all of these conceptions have to do with the social mind, the mechanical nature of social consciousness, in its entirety, becomes highly obscure. Yet if we remember that social action is only the synthesis of individual action, it will be seen that an analysis which reduces the one to mechanical principles will likewise so reduce the other. The consciousness of a man grows from his birth with the growth of his brain. His facility for thought is acquired by exercise of the brain, repeated again and again, along the same lines of action. Facility of

social thought is controlled by the same causes, and, with a society as with a man, thought determines action.

The mechanical nature of the social mind is simply illustrated in societies other than human. In a stampede of a herd of buffalo the animals in the middle of the herd have not the slightest notion of the particular cause producing the collective movement. Yet we can conceive that every buffalo in the herd is aware that some kind of *danger* is afoot. Here the method of communication is almost instantaneous, and the herd moves with the precision of a single individual. The social consciousness of a swarm of bees, in removing to a new hive, is a perfect example of the unanimity which renders social action visibly mechanical. Every precaution is taken for the favorable result of the flight. Scouts inform the hive of the discovery of the new site. If, after the swarm leaves the hive, the weather should suddenly become unpropitious, the bees return to their domicile. Once successfully launched in the swarm-flight, the body moves forward to its destination, quickly applies itself to the work of constructing the foundation and the superstructure of its social habitation, and proceeds forthwith to enter upon its normal economic labors.

Can we rationally deny to the individual bee, in the swarm, a consciousness of the purpose of the flight? Can we rationally assume that mere blind instinct impels it to action of which the purpose is manifestly known to the bees leading the swarm to the new hive? Or is it more logical to assume that each particular insect is perfectly aware of what is

going forward, as each particular buffalo or deer in a stampeding herd is assumed to understand the cause of the general movement? If one buffalo has sufficient power of mind to know that when danger threatens it is wise to flee from it, why should others of the species be less acute logicians? If one bee can discover a favorable site for a new hive, pass judgment upon it, and lead the swarm to the new location, why should we assume that similar powers of ratiocination are denied to other bees of precisely similar structure? And, finally, why should we conclude that actions on the part of bees, precisely similar to actions of men, are due to some occult force in the nature of the insect, while in the man they are due to the force of reason?

We confess we are unable to perceive any difference whatever in the mental force impelling a bee to store up honey, and that which impels a man to store up wheat. And we are as much at a loss to see any difference in the mental force which moves bees to build cells of wax, and men to build houses. The simplest explanation of the facts would seem to be this: The bee stores honey because experience has taught it that a store of honey sustains its life when honey is not to be found abroad. It builds a habitation in order that it may husband its supply of food, and in order to protect itself from the inclemency of the weather. We do not know of any motive than these impelling men to lay up wheat in granaries, and to build houses for habitation. When men emigrate in large bodies from one locality to another, when they fly precipitately in a swarm from a theatre in which some one has given the alarm of fire, when they trade commod-

ities in a public market, when they vote together for protection to industry, or when they organize into an army to fight a neighboring community, are they not doing precisely what hive-bees do, and for the same purpose?

If the social conduct of men be produced by reason and that of bees by instinct, we will be forced to admit that the blind instinct of the bee is vastly superior, for social purposes, to the reason of man. But this notion need not alarm any member of the human species for his dignity of mind or of body. For if the social action of the hymenoptera is more conducive than that of men to the liberty, the morality, and the happiness of all, it is because bee communities are comparatively very wealthy groups, in which the diffusion of political power and the diffusion of wealth are in perfect equilibrium; and because, moreover, the close contiguity of habitation renders the method of communication perfect, and makes social consciousness continuous and complete.

This economic equilibrium in bee communities has been quickly and easily produced because the food capacity and psychic capacity of the bee are in equilibrium in the individual. Give to the bee sufficient food for present and future use, together with a habitation which will protect it from the disasters of the weather, and other destructive causes which can be overcome, and the mental wants of the insect are satisfied. And it is not all men who are as rational as the bee in this respect. There are some human savages who are so improvident as to be unable to lay up food, and who are incapable of perceiving this relation to the environment, even in the face of

death by starvation. While among civilized men, most communities have not so rational ideas as have hive-bees as to hygiene and sanitation.

The ventilation of a normal hive and the careful manner in which the hive is purified of unsanitary matter produced by excretion, might be studied to some purpose by men in even the most civilized communities. All these somewhat remarkable actions may be due to the "unreasoning instinct" of this highly intelligent little animal. And if some apiologist should discover that bees have in practice a system of therapeutics as well as hygiene, we should be prepared for the ever ready theory that this practice is *instinctive* therapeutics and not *rational*, as is the practice of medicine by men! Those comparative psychologists, — and their number is not small, — who still believe that there must be a qualitative difference between the motives of man and all other living creatures, calling the one instinct and the other reason, are probably as wide of the mark as were their predecessors in human psychology, who accounted for the "unchanging substance" of mind by the postulation of a "psychic principle." When it was learned that this "unchanging mental substance" had no reality save that found in the process of *metabolism*, the theory of the "psychic principle" was forthwith abandoned once and forever.

If we compare the conduct of hive-bees with that of civil men, we must do it from one of two points of view. We must contend that bees have no moral sense whatever, or we must admit that if they have moral ideas at all, they have them in high degree of quantity and quality. If we hold to the first proposi-

tion, we are thrown back upon the assumption that the social elements of morality are essentially different in men from those of all other intelligent animals. These elements, it will not be denied, are the desire of the individual for a free and ample existence, the love of offspring, and the conceptions that flow from these two forces, such as respect for good citizenship and repugnance to action found to interfere with the purposes of life. If it be said that all these mental characters are not moral, but are *born* with the bee, — for surely bees have them all, — then our only conclusion must be that a bee is born with a social instinct incomparably superior to that with which a man is born. If reason be the determinant of man's morality, — if he is moral because he is born rational, — then we can only conclude that his reason *plus* his morality produces a social state vastly inferior to that of bees, which are assumed to have neither morality nor reason in any degree at all.

On the other hand, if we admit the second proposition, — namely, that bees really have moral conceptions, or a sense of right and wrong, — we are forced to the conclusion that their moral ideas react upon their conduct in a manner that has been long the dream of philanthropists and reformers for the future of humanity. If bees have ideas of morality, we can well believe that to this force are attributable the admirable order and justice which have made their communities the exemplars for human moralists of all ages. If we conceive of a community of men in which all share the burden of life equally, and equally divide the wealth produced by the common effort; from which theft, violence, and injustice of every

conceivable kind are absent; in which the first endeavor of each is directed toward the good of all; in which motherhood is the most sacred of ideas, and the rearing of young is attended with tender and scientific solicitude; in which liberty and equality are vitally organic; wherein to be a *man* is universally accepted evidence of full duty done and highest reward earned — if we conceive of a community like this, we shall have the ideal conception of social justice.

And if we find that hive-bees are lacking in one of these characters, — if they slay the drones and allow queens, when there is need, to slay one another, — we must remember that such is the fact only because a single female of the species produces two thousand young every day in season.

But if we admit that bees have moral ideas, we are not therefore required to conclude that these ideas are as complex as those of men. We are, in fact, compelled to conclude the very reverse. Social morality arises out of individual morality. The moral concepts of a solitary animal cannot rise above the simplicity of its functional needs. Animals which have not progressed beyond the family group have ethical perceptions and ideas pertaining only to the family. Family ethics are compounded into higher degrees of complexity, as families are merged into tribes and tribal relations are included in moral thought. With men we have national or political moral ideas, and lastly we have the ethics of the *genus*, under which are grouped all moral ideas with relation to man. Thus we find amity among animals of the same family and the same tribe; and in men, amity

among members of the family, the tribe, the group, the race, the genus. But if the moral ideas of social man are more complex than those of social animals of other kinds, the fact is due to two causes. One of these causes is the higher character of man's nervous apparatus, and the other is a jointure of this complexity with a complex environment. Out of this twofold cause arises the social state of men with all its accompaniments of progress — morality included. If we find that hive-bees — the most socially developed of all animals — present a social state more moral than that of man, it is only because that bees have outstripped man in social development. With them, *individual wants are in equilibrium with social needs*. And this state has not yet been reached by any society in human history. Human social kinetic energy flows in the same direction as we find social energy flowing in groups other than human. Discoveries of new relations to the environment have eased the flow in some groups, while other groups have progressed more slowly, or have fallen out of existence. But in all groups, human or otherwise, we find the same relations of government to capital where government and capital coexist. These relations are found to depend upon the quantity and the diffusion of wealth. They are determined also by the clarity, the vividness, and the complexity of the social consciousness of the group; and the rapidity of social intellection is determined by the proximity of the individuals in the social state to one another, and by the efficiency of their instruments and methods of communication.

Among men we find some individuals with moral

ideas more complex than those of any individual social bee. And, again, we find orders of social bees with moral ideas more complex than many individual men. But the complexity and the simplicity in both man and bee are determined by the character and quantity of wealth, its diffusion, and the quantity of social consciousness, together with its means of action. There can be no moral or economic progress in the most socially developed groups of bees because the diffusion of wealth is perfect, its quantity is sufficient for the vital and psychic capacity of the individual, and because those acts of bees deemed immoral by human standards are necessary for the highest good of all, and hence perfectly moral for the insect. To the bee, the death of the individual whose life is a menace to the life of all, is a necessarily moral desideratum. And this is a law of human morals also.

CHAPTER XI

SOCIAL EQUILIBRIUM

THE time has now come to lay before the reader the supreme conclusion of our theory. In doing this it is necessary, we believe, to say a few words for the benefit of those who have not made a special study of economic science; to set forth, in plain and concrete terms, the real meaning of the law of capitalization developed in the preceding pages.

The law of capitalization is really nothing more than a statement of the order in which social phenomena take place. It is not a *force* at all. It is only a *statement* of the order in which force issues into action. We first define what we mean by the term "government"; then we define what we mean by "capital"; and lastly we observe the universal manner in which these things mutually conduct themselves. To the statement of this universal conduct, made in general terms, we give the name of the "law" of the conduct, or the law of the *process* of capitalization.

The law, if it be a general one, must cover all the movements of society; it must account for the decay of societies as well as for their growth; and if it be a *true* law, no exception can be found to the general process it formulates.

But while all this may be perfectly rational, it by no means implies that a mere statement of the law will enable us to conceive a *completed* process of social growth. Given a completed process, as, for example, that of hive-bees, and we can account for it by the law of capitalization. In a similar way we can account for the equilibrium of a planet's motion by using the law of gravitation as a basis of computation. But it is clear that if there were no equilibrated planetary motion, no regular and rhythmic action of celestial bodies, we could not forecast a system of motion like that observed in the planets which revolve around the sun.

In all that has gone before, our principal aim has been to ascertain the regularity of movement in the matter of wealth. Wealth and its diffusion have been the basis of our study. But when we have reduced all movements of wealth to their highest terms, we have only, after all, ascertained the general fact that social motion issues in an ever enlarging diffusion of wealth among social men.

Our present position appears to be this: We have found that social motion carries us along a right line in the direction of an equilibrium in which the sum of social product shall be equally divided among those who create it. For the sake of theory, we can admit that human society will really reach that state sooner or later; that the time will come when all capital that *can* be owned by the public *will* be owned by the public; and that no producer, employed in this general and public creation of wealth, will receive a pennyworth more for his labor than will any of his fellow-workers, no matter what may be his oc-

cupation, or how long or short will be his hours of toil.

Let us suppose, as we have said, for the sake of theory, that this equilibrium will really be brought about. The question at once suggests itself: Will that equilibrium be stable? Will society always remain in that state, ever dividing its social product equally among the producers? In other words, is there any force in the common nature of men which would break up that state, even if we grant that such a state could be once established?

If the disposition of the matter depended upon the selfish desires of men for wealth, we could assuredly answer the question by saying that such a state of equality could *never* be disturbed. For the majority of men would never consent to a change in a system which secured the highest possible comforts with the least possible effort. But the equilibrium would not depend upon common ideas of justice and of personal rights. It would depend upon something very different. It would depend upon the number of the individuals among whom the social product would have to be passed about.

We can imagine an indefinite prolongation of this comfortable state of equality so long as we can imagine that the earth will give up to man an ever increasing quantity of wealth. We can imagine the population of the world increasing with enormous strides, and society redoubling its efforts to extract wealth in quantities sufficient to satisfy the compound multiplications of numbers.

But this kind of a prospect is very far from satisfactory. It will not do to say that the earth is very

rich, and can be worked up to support inconceivable numbers of men if its resources were but adequately exploited. This will not do at all. We cannot leave human society in this extraordinary position and be certain of anything. Who knows whether methods of agriculture will ever be improved to such an extent that there will never be a scarcity of food? We can imagine a very serious and permanent disturbance of the equilibrium if we imagine an indefinite increase of population — accompanied by the slightest failure to meet the new demands. It is this apparently inevitable world-crowding that offers the vulnerable spot in all ideal social systems based upon an equal division of wealth. It will not do to postpone the day of reckoning by a vague hope that invention will help out posterity, and that men will find *some* way of overcoming the difficulty. We do not know that they will find anything of the kind. If we know anything, we know precisely that they will not and cannot find it. To dispose of the question in such a helpless manner as this is pure childishness, having neither reason nor common sense.

What then? the reader will ask. Grant that human society will one day reach an equality of wealth like that of hive-bees, what is the condition of its permanency? How is the equilibrium to be maintained, if maintained it can be at all?

If we suppose that human population will go on indefinitely multiplying, crowding the earth with billion upon billion of human inhabitants, as wealth enlarges and nations prosper, we must abandon the idea that social equilibrium of a permanent kind can be produced. The equilibrium, at best, would be tem-

porary and precarious. Equality would be broken down, and society would return to its former state of struggle for unequal quantities of wealth.

But if we suppose that there exists in society a blind force which is seen to act as a *check* upon population, — a force ever silently at work, and ever drawing within the circle of its power larger and larger numbers of human beings, — we could then see our way to an equilibrium of equality in wealth stable in a high degree. If we can discover such a force and, furthermore, find out the law of its action, we shall be on the way to a solution of the problem that has puzzled many thinking men since Malthus announced his theory of population. We shall be enabled to clear up the difficulties confronting the socialists whenever these active philosophers have permitted themselves to look beyond their immediate desires for reform.

If, moreover, on finding this force, we find, too, that it arises directly out of the very process of economic equilibration itself, we shall have made a discovery of the utmost importance. Understand well what we mean: *The force which checks population depends upon the diffusion of wealth among men.* If, in finding its economic equilibrium, human society at the same time, unconsciously and necessarily, draws its population, up or down, to a normal or mean number which will neither increase nor diminish once that the economic equilibrium is established, we shall have no farther to look for a solution of the problem of population.

If such be the fact, it would mean that the human population of the future will be controlled, as to num-

ber, by a self-regulating method entirely independent of the will of man—as independent of that will as any other process of man's body or mind, and no more to be compared with the method in practice among bees than man's body itself is to be compared to the body of an insect.

What we hope to be able to show is this: That the number of population in any social group, whether human or not, depends upon the quantity and the kind of wealth produced by the group; and that it depends, furthermore, upon the diffusion of wealth among the members of the group, or upon the degree, rather, in which wealth is used and the manner of its using. We hope to show that as the quantity and diffusion of wealth progress, population increases up to a certain point; that when that point is reached, wealth acts as a check upon population, rapidly stopping its increase; and that the action thereafter is not in the way of a *decrease*, but in the way of a maintenance of population at a mean number, above and below which the actual number must rise and fall in a regular rhythm of movement, controlled by a law as definite and as calculable as the law underlying the rhythm of planetary movement in the solar system.

The best commendation we have to offer for this theory of population is its simplicity. All that is needed for its development is the acceptance of the general principles of social life we have laid down in the preceding pages. Of course, if these principles be rejected, we could not hope to convince any one denying them that our theory of population is true. The law of capitalization, we take it, is very like Darwin's law

of natural selection — that is to say, it is a law which hardly needs more than a detailed statement of it for the perception of its truth. It is a process which is open to the observation of anybody who cares to look at it. And if it be a true law, one of its inevitable corollaries is the theory of population which we will now proceed to unfold.

It is a fact of commonplace observation among biologists that the fertility of animal organisms is dependent upon the weight of their nervous apparatus. Animals having large and weighty nervous systems will multiply less rapidly than animals of the reverse kind. Offspring from parents having a comparatively small weight of nerve-substance will be comparatively many; offspring from parents with a comparatively large weight of nerve-substance will be comparatively few.

We could suggest numerous examples of this law of animal fertility, but a few will suffice to make it clear. In the class *animalia*, fish occupy a comparatively low place. The weight of the nervous apparatus of the fish is comparatively light, and the offspring of fish are notably numerous. The red herring, if left alone, could reproduce itself so rapidly that its progeny in a few years would fill the oceans of the earth and cover up the land as well. The sturgeon is another very prolific fish. According to Dr. Buckland, quoted by Professor Lester F. Ward, a single sturgeon emitted at one spawning 921,600 eggs, every egg being capable of growth into a fully matured fish. The same law will apply to the class *insectiva*, and we touched upon this matter when we discussed the method of propagation in the bee.

When we pass from the fishes to the mammals, the law of fertility is equally apparent. Rabbits, having a comparatively light nervous apparatus, breed several times per year, and produce several young at a birth. The elephant, which has a nervous apparatus heavier than that of any other mammal, — man included, — brings forth offspring at the rate of one per birth, and that only after a period of gestation of two years. For a more detailed examination of the law of animal fertility, we refer the reader to the second volume of Herbert Spencer's "Principles of Biology," a revised edition of which has been recently published.

These facts will be seen to have a direct bearing on the question of human population. But there is another order of facts having a bearing no less direct; an order of the highest importance for us in our present inquiry. It is this: The numerical quantity of offspring depends not alone upon the quantity of nerve, or brain, but also upon the quantity of its *use*. For the sake of convenience we will hereafter make use of the word "brain" when we discuss the relation of nervous systems to the number of offspring.

Exercise of the brain, therefore, has as much to do with the number of offspring as has the size of the brain itself. This fact is only an example of the law of the conservation of vital energy. If any particular part, or organ, of the body be exercised more than the other parts, or organs, larger supplies of blood will flow to the organ or part so exercised. If the heart be exercised out of proportion to the other organs, nutriment will be taken from the others and will flow to the heart. If the brain be unduly exercised, the same process will take place. An undue amount of

blood will flow to the brain at the expense of the rest of the vital structure. The proficiency of all the other organs will be reduced in just the measure in which nutriment is drawn from them and sent to the brain. And what is true of one organ is true of all, including those used for purposes of propagation.

For the present let us consider the force of these facts as they apply to the human species. The brain of man is relatively larger than that of any other mammal. The law of the conservation of vital energy applies to him as well as to all other living creatures. Expenditure of vital energy of any kind, muscular or nervous, affects alike all his organs other than those used in the expenditure. Thus if the demands of the brain for nutrition be relatively great, the assimilative, muscular, and reproductive systems will be drawn upon for part of the blood which would otherwise flow to them. Hence, with man we have two determinants of fertility—the size of the brain, and the degree in which it is exercised.

In other species, or in most of them, the determinants are three in number; for in all but a very few races, natural selection makes use of fertility itself as a means of survival. In the struggle for existence the more fertile animals will be the ones to survive and propagate, while those less fertile will be eliminated. But the human species, and a few others, are exempt from this force. With men, fertility has no longer a value in the struggle for existence; and in the struggle for wealth, fertility is often, and for the most part, a serious disadvantage. In this lies the key to the very law for which we are seeking.

A fact of social life to which a growing importance

seems to be attached must now be brought into our inquiry. It is a matter of almost proverbial comment that cultured persons beget a comparatively small number of offspring. The poorer classes are notably prolific. So much so that many well-intentioned, if somewhat unobservant, individuals despair for the future happiness of the great mass of mankind. The very classes to which large families are in reality a curse are the very classes that breed most freely; while the richer people of a community, to whom a large family would be in no wise a burden, are the very ones to whom numerous offspring are denied.

This important fact will be explained when we consider it in the light of the second determinant of fertility mentioned above. The size of the human brain determines the fertility of the race as a whole, but we can dispense with this factor of the law for the present. It is the second factor which concerns us here. For if we suppose that two individuals have the very same weight of brain, and one of them uses his brain more than does the other, one will be more fertile than the other. This, according to the law of the conservation of vital energy. But one may have a larger brain than the other, and yet be the less fertile of the two, if the smaller brain be exercised more freely. Let us substitute the word "intelligence" for the phrase "exercise of the brain," and we will greatly facilitate our exposition.

In our discussion of the increment of capacity we noted that the cultured man could find a pleasurable use for objects of no value in use to the man who had never possessed them. But to say this is only to say that the cultured man is more *intelligent* than his less

fortunate and poorer fellow. That is to say, in the satisfaction of his intellectual wants, he puts a demand upon his brain which is not put upon the brain of the man whose intellectual wants are few by comparison. Wealth, in the hands of the cultivated man, stimulates his brain to activities altogether absent from the mental life of him who, through lack of possession, has very few intellectual wants which wealth can satisfy.

Now, if intelligence, or cerebral activity, reduces the fertility of the animal organism, we can very well see how the man with large and varied wealth will produce fewer offspring than the man who has never learned the use of that wealth which stimulates the brain to action. The energy, which the rich or cultivated man saves in muscular effort, he more than expends in cerebral effort. And the stimulus to mental effort, in the cultured man, is greater than that to muscular effort in the illiterate man. This is particularly true of prosperous communities. For as a community grows rich, it secures its wealth with correspondingly small expenditure of muscular energy.

But the effect of this fact on a prosperous community is profound and far-reaching. As wealth is progressively diffused, the stronger will be the stimuli to mental activity. For as men grow rich they grow also intellectual. As they grow intellectual they grow desirous of becoming more intellectual still, and they value intellectuality in others by standards correspondingly higher.

Thus it is seen that intellectual capacity, which acts as a check upon population, becomes the very capacity most highly desired by constantly growing numbers. The active cause at work is the progres-

sive diffusion of wealth which, be it remembered, is steadily advancing toward a state in which all will be equally wealthy, and hence capable of exercising the brain in a very nearly equal degree.

Here, then, we find the elements of the law we are seeking. Here is the blind force now at work checking population in a very conspicuous way, and most conspicuously in those political groups that are the wealthiest. The elements of the law are clear. How does the law act?

In human society, as it is at present constituted, the man selects the woman for his mate. Woman has been and still is, though less so than ever before, the bond-servant of the man. Yet she has very much to do with the selection. If we imagine that women were perfectly free to choose their mates, entirely apart from questions of livelihood, it is plain that, all other facts being equal, she would select the more intelligent man. The man, too, would select the more intelligent woman. There need be no doubt of this. Other things being perfectly equal, — such as beauty, purely personal attraction, and other elements drawing the affections, — the intelligent mate will be preferred on both sides.

Thus, as intelligence becomes more generally diffused, with the diffusion of wealth, intelligence itself becomes highly desirable as a means of securing a desirable mate. Here is a force acting quickly and surely as a check to population. Without this growth of intelligence the effect would be the very opposite. For we know that with an uncultured people, higher wages produce greater numbers. And if we could imagine a society in which wealth and its diffusion

constantly increased, while the people remained uncultivated mentally, we could conceive of a multiplication of numbers without an end. But we can imagine no such thing. We know very well that the possession of varied wealth is always accompanied by an increase of intellectual activity; that is to say, when the wealth possessed is more than sufficient for the bare gratification of physical desires.

From these considerations it would appear that the exercise, and not the size of the brain, is the primary factor in the checking of human population. We shall now have to consider the secondary factor, and we hope that the reader will try to follow the argument closely, for he will see, as it opens out before him, how one link of the reasoning hangs on the preceding link until the entire chain is completed. We are now upon the threshold of a disclosure of the most important character, and we cannot be too careful in our disposition of the facts as they rise in their proper sequence. We must always keep before us the idea of a community in which wealth is progressively diffusing; a community ever advancing, with accumulating rapidity, toward the state in which all individuals will be equally rich, or very nearly so.

The brain of the average woman weighs about five and a half ounces less than that of the average man. But the size of the brain varies with various individuals. In some women it is heavier than in others. Now, as wealth is diffused, larger numbers of large-brained women, by the use of wealth and the consequent stimulation to mental effort, acquire a quantity of knowledge which, previously, was unusual with members of the sex. That is to say, larger numbers of women become unusually intelligent.

The newly intelligent women are selected as mates by an increasing number of men. These men are themselves variable with respect to the size of the brain. And as they, too, participate in the advantages of the newly diffusing wealth, they are themselves unusually intelligent. There is thus established a reciprocal preference for intelligent persons in the selection of mates, and its result is highly interesting. The process issues in the production of an increasing number of both sexes having brains above the average in weight. But there is another, and an important, fact to be considered. Larger-brained women would be selected by smaller-brained men; for men, on the average, are more intelligent than women — that is, they have a more varied knowledge. The result of this fact is that *the size of the brain is increasing in both sexes*. And the increase in size is accompanied, in fact it is produced, by an increase in use. We have here, therefore, a twofold check upon population drawing within its power wider and wider circles of men and women as the quantity of wealth multiplies and its diffusion proceeds.

If we look into the future, however, it may appear that there is no limit to the extent to which this process can be carried. If we could find no end to it, we might be driven to the absurd conclusion that the size of the human brain could go on increasing indefinitely. We might, indeed, be compelled to admit the force of the somewhat grotesque prediction that the man of the future will consist of an enormous head, filled with brain, and that the remainder of his body will be shrivelled up into rudimentary-like appendages.

But this view need cause us no alarm. If the size of the brain is increasing by reason of wealth and its uses, we can look to wealth, and the laws of its use, for some force by which the increase in the weight of the brain will be stopped. It is not difficult to find that force. The process of increase will go on, it is true, so long as the more intelligent men and women select one another for mates. But if we imagine the coming of a time when intelligence will be no longer a decisive factor in the selection of mates, then we can see a quickly established end to the enlargement of the brain. That time can come only when variation in intelligence will be so slight as to make no very great difference in the preference of one person to another in the matter of marriage.

Intelligence is *now* a deciding factor unquestionably. When will it cease to be such? It will certainly cease when the persons to be selected are all equally intelligent. So long as intelligence is highly desirable in a mate, we may look for the intelligent ones to be preferred. But as soon as the selectors are left with little choice in the matter; as soon as all of those to be selected are equal in this highly desirable quality, there will be no choice in this respect, and intelligence will give way to other qualities such as beauty, personal attraction, disposition, compatibility of temper, and other determinants of choice never lacking in the uniting of human pairs.

But how can this state of things be brought about? It is not difficult to conceive of such a state if we imagine that the causes producing variation cease to act. These causes are no less than the use of *unequal* quantities of wealth by various individuals. In

an earlier chapter we saw that wealth and its uses produced different degrees of intellectual capacity among men. We then explained that there was a variant from the formula which we would examine later. We will redeem this promise presently. Of course it is not held here that the use of equal quantities of one kind of wealth will produce equal capacities of one kind, or equal talent for the same pursuit, in all of the users. Ten individuals may have equal opportunities for the study of astronomy, yet no two might be equally adept in that science. But with equal opportunities for all individuals in all kinds of pursuits, there can be no general inequality of intelligence. This is the truth as it is observed in society generally. There is no striking general inequality of intelligence among the male or among the female members of cultivated society. In the matter of polite information, capacity for understanding, familiarity with letters and art, and keen perceptions of mind generally, the men of the cultured classes are very much alike, and so are the women.

If, now, we suppose that *all* the people of a community have the same advantages of education as have our own cultured classes at present, it would appear that intelligence would be at par in all. In other words, there would be no disparity of intelligence as there is at present. And as disparity of intelligence is *now* produced by inequality of wealth, we can only conclude that it would disappear if equal opportunities for the use of wealth were given to all alike. We need scarcely add that these very opportunities would be open to all in a society where socializable capital would be owned and operated by

the state, and where all the producers received equal compensation for labor performed.

It would appear, then, that we are rapidly comprehending the conditions of the method by which population is to be controlled in the future. That method is really no more than an universal application of the method which is operating now among the wealthy classes. We have seen how intelligence checks fertility; how intelligence multiplies itself by the reciprocal selection of intelligent mates; how equality of intelligence limits the selection, and finally how intelligence loses altogether its decisive value as a desirable attraction to marriage. All this seems to be very clear. But the *crux* of the question is yet to come. What we desire to show is that the time must come, under the operation of these forces, when the population of the earth *will have reached an unalterable normal number*.

To conceive of this state as being produced and maintained, we must conceive that the number of disappearing, or dying, population will be constantly replaced by precisely the same number of new individuals. In other words, the number of births must be the same as the number of deaths. If the longevity of all be conceived to be the same, the number of disappearing individuals must be compensated by an equal number of new individuals born into the world. We may state the matter in still another form by saying that *the number of births must be two for each united pair*. Is there a blind force, growing out of the diffusion of wealth, which can be seen to produce this remarkable result? We say with confidence that there is, and that it is found in the play of the two

counterforces of natural selection and sexual selection. Let us develop this thought.

Women mature earlier than men, and hence fertility in them ceases at an earlier age than does that of men. But early maturity is due to the size of the brain. As the brain of the woman grows heavier she matures later. It is a law of animal life that late maturity is accompanied by longer periods of gestation.

Let us recall, now, the fact that with expanding intelligence population is reduced. With unchecked reciprocal selection for the sake of intelligence, the reduction would go forward until the race would die out. At present man is exempt from the law of survival when it is mere fertility that determines survival. When the members of a race are not destroyed in large quantities, the more fertile individuals are not selected by natural forces and made to survive and propagate. Natural selection does not act. But as soon as the more fertile individuals have an advantage over the less fertile ones, natural selection begins to act at once. It does not matter how little the advantage may be. If there is *any* advantage, it cannot escape the action of the selective force.

In societies of men, as we have said, fertility is given the freest of play. All produce as many offspring as they can, and there is no individual struggle to the death. But in the circumstances we have supposed above—that is, the general decrease of population—it is evident that the less fertile individuals would tend to disappear, whereas the more fertile ones would remain to multiply among themselves.

It is not that the more fertile ones would be *consciously* selected by those desiring mates, for fertility would have no value in sexual selection. And as we have seen, *intelligence* would have no value either. Thus the majority of those selected would be of the more fertile kind simply because of the greater preponderance of their numbers.

But owing to variation in the size of the brain and its use, variation in fertility would be ever present. Some would produce more than sufficient to maintain the normal number, and some would produce less than sufficient. The total number would ever tend to rise above and to fall below the line at which the race would be maintained. If all lived to the same, or nearly the same age, the maintenance of the race would depend upon an average production of *two per united pair*. Variation in fertility would therefore safeguard the race from dropping much below that average production. For as soon as it would drop to a very appreciable degree, natural selection would seize upon the more fertile individuals who would soon bring the average birth-rate per pair up to the required number.

Thus we see that natural selection would prevent the race from any considerable depletion in numbers. But it would do more than this. It would set up anew a rapid increase of population which would carry the average number of offspring per pair far beyond the necessary compensating number. Another blind force would have to stop this new increase if we are not to suppose that population would be indefinitely multiplied. The average number per pair might grow to three, four, or five. What is the

nature of the blind force which would prevent this over production of numbers?

Clearly, it is again sexual selection. For with increasing numbers, and a considerably wide variation in the size of the brain, *intelligence would again assert itself as a factor in marriage*. From out of the whole number, the more intelligent persons would be selected for mates, and hence the less fertile would once more have an advantage. Again it would not matter how little the advantage might be. *Any* advantage at all would be sufficient to draw the number of population down to the normal state and even beyond it.

We can set forth the operation of the law by considering how it would act if we should suppose that the normal population of the world be one hundred. According to the law, the actual number of the people would oscillate in a regular rhythm above and below this mean number. Let us now suppose that sexual selection, in favoring the more intelligent persons, had reduced the average number of offspring per pair to *less* than the required two. Thus, thirty pairs produce thirty new individuals, and twenty pairs produce forty new individuals, causing the normal of one hundred to be replaced by only seventy. The actual population would then be *below* the mean number.

Of these seventy individuals a majority, or forty, would be more fertile than the remaining thirty. These would breed together, and the average number of births per united pair would rise. We can suppose that, of the seventy, twenty pairs will produce forty new individuals, and fifteen pairs will each produce one individual. The actual population will then have risen to seventy-five. This process, repeated

again and again, will soon bring the total to one hundred and above it.

The increase thus set up must be checked when, other things being equal, intelligence again becomes desirable in mating, and the *less* fertile ones are selected for propagation. The average of births per pair will then take on the reverse motion, and will fall again to the normal one hundred and below it.

This is the theoretical conception of the law. But if we look into the facts as they actually exist, at present, among the wealthier classes, and which must exist universally when equal opportunities for education are given to all alike, we will find that the forces of selection act so as to maintain the equilibrium with only a very slight perturbation from the norm. For with intelligence of no selective value the *less fertile and the more fertile breed together*, thus leaving the corrective force constantly free in its play. If the less fertile indiscriminately mate with the more fertile, over production among the latter is limited by the former, and the balance is maintained. Variation there would be, of course, but it would be so slight as to be practically imperceptible.

Here, then, we have that rhythmic, moving, stable equilibrium of population we have been looking for; an equilibrium as stable as the motion of a planet in its orbit, or as the pulsation of the heart or of the brain; and an equilibrium, furthermore, as independent of the volition of man as are the regular movements of his heart, or of any of the other natural functions of his body. That equilibrium is now rapidly nearing its completion, and the forces producing it are just as independent of human volition,

just as free from the grasp of human control, as have been the forces that have moulded the plastic somaplasm of life into the varied forms of living creatures inhabiting the world. Let us sum up these social forces as we see them functioning in human groups, and let us state broadly the bases of our conclusions.

Under the stimulus of accumulating wealth population increases. But population tends to decrease as the socialization of capital more widely diffuses the wealth that is produced. When the limit of socialization shall have been reached, population will rest at a mean number, no longer to shift to new levels. That mean number must remain fixed. But if it remains so fixed, the force which controls it must remain fixed also. That force is no other than the mental activity of men. This, then, must vary in its quantity only in the degree in which population varies. And if this be true, there must be a third quantity of social force which itself remains fixed. This third quantity can be no other than the basic cause underlying mental activity. We cannot look for this cause in the quantity of wealth. For we know that wealth is now, and must always remain, variable as to quantity. What, then, is this third and last force determining the mean of mental activity, which itself is the determinant of population? If it be anything, it can only be the *capacity of men* for the use of wealth which stimulates the brain to action. How, let us ask, can the use of wealth maintain the mental energy of men at a quantity varying but slightly from an unaltering norm?

In a state of equality as to wealth the very great majority of men would be engaged in public produc-

tion ; in other words, they would be employees of the state. The minority would devote themselves to labor of an individual kind ; that is, their work would consist of services made especially valuable by a special talent in the rendering of them. The stimulus to mental activity in the majority would be the equal shares of wealth flowing to them as compensation for their work, and serving the further purpose of a pleasure-stimulus to their minds in hours of leisure and recreation. The mental energy of each could not be greater than the inherent capacity of each for the use of wealth, or for the labor to be performed. Each, however, would be moved to mental energy as far as mental capacity would permit. If, upon leaving the public employ, the individual would engage in privately rendered service, the same thing would be true of him. The stimulus would be the same in the one occupation as in the other. It would move the individual to the highest degree of work, or of pleasure, of which he would be capable. But, as we saw a few pages back, there is very little variation in mental capacity among men and among women when all are given the same free choice for the selection of their mental pursuits, and are favored by a choice of many kinds of wealth.

So it is seen that in a rich and free community, wherein all have equal advantages and equal freedom of choice, the sum of mental energy would be the same when measured over considerable periods of time.

This sum would vary, of course, from one age to another, as men would relax or redouble their mental efforts from one or another cause. But the mean of

mental energy would be maintained, as is the mean of precipitation over the whole surface of the earth. The quantity of fallen rain and snow varies from day to day and from month to month, but the whole quantity remains the same when measured over considerable periods. And this quantity remains fixed because the force which causes evaporation—the heat of the sun—is itself unvarying.

In Chapter X we saw that the efficiency of instruments of communication determines the celerity and the clarity of social thought. As these instruments improve, social consciousness grows continuous and complete. Scientific discovery, and its quick and general communication, stimulates the social mind. But every increment of discovery causes a smaller rather than a larger increment of mental energy. The brain, like all other organs, develops proficiency by use. The expert mathematician solves with little effort problems solved only with great effort by the beginner.

Periodicity of mental energy, in an equalized, or equilibrated community, would react periodically upon population. But if social consciousness be conceived to be continuous and complete, this rhythm of rise and fall can be conceived to be perfect.

The reader may well ask: Is this to be the end of human progress? Are we to conceive that all the races of man are to be reduced to an intellectual level by this process of wealth-diffusion and socialization? Is the Negro, the Papuan, the Mongol, the Malay, to be so changed in his character that he will be the equal of the white man? Are the Aryan and the Semite to lose their intellectual superiority, and

is the child of the Zulu to be lifted, after all, to a state of moral and mental civilization to which his Caucasian brother will be only an equal heir?

If we answer Yes to these questions, we will be quit of the need of accounting for the so-called inferior races in our theory of equilibration. But we cannot make this answer. Popular opinion, wrong though it may be in many or most of its conceptions, is probably right in this; and popular opinion upon this matter seems to be very positive in the negative. The average European does not *believe* that the Papuan or the Bushman can be transformed into a man intellectually equal to the best products of European civilization.

We are aware that there is a growing cult among some biologists, of a highly speculative turn of mind, which assumes that all that is needed to convert the Bushman into a La Place or into a Goethe is a few tools and a somewhat lengthy residence in Paris or in Berlin. But this is a conclusion from Weismann's theory of a piece with some others. The one instrument essential to such a conversion is the *brain* of a La Place or of a Goethe; and until we can see our way clear to supplying the Bushman, or his cousins, with an instrument of this kind, we may as well forego our hope that a sort of Weismannic paradise will be forthwith produced.

If we admit the possibility of this sudden transformation, we shall have to prove that there is no anatomical difference in the brain of the various races of men. To assert that no such difference exists, and that all humans are intellectually equal, will involve us in some odd conclusions. It is equivalent to the

assertion that man is exempt from natural law ; that selection and survival do not produce the human race in the same way that other creatures are produced ; that the very fact of being a *man* makes man essentially different from other races very nearly like him.

These assertions are absurd. The word "man" is a fine bugbear, and has long served the purpose of frightening timid persons who were not overinformed in the truths of natural history. But man, after all, is only an idea. We could use the word "dog" much in the same way ; but when pushed for a definition, we should hesitate whether to include in the class of that "noble and intelligent" animal such creatures as the wolf, the jackal, and a few other species which are *not* so intelligent or noble. Yet these are quite as much dog as any canine companion of man. The comparative anatomist is troubled with no such fine scruples. For him the word "dog" has no false meaning, and for him the word "man" has no terrors. If he uses the word at all, he uses it as connoting a genus of animals with certain specific anatomical characters, and that is all.

Now, the question of psychological variation among races of men is not precisely settled, for the principal reason that sufficient data are lacking. But so far as observation goes, there is reason for concluding that there is marked deficiency in some human races as compared with others. The evidence gathered by the French anthropologist, Topinard, and adduced by Dr. Deniker, in his "Races of Man" (London translation, 1900), would indicate that the European brain is the heaviest and that of the Australian the smallest. Between these extremes come the Polynesians, Java-

nese, Mongols, Melanasiens, Negroes, and the Dravidians of southern India, in that order.

Intellectual capacity is determined not only by the size of the brain, but it is chiefly determined by the number of convolutions, or by *certain* convolutions, in the gray layer. The evidence is not *positively* conclusive, but it is conclusive enough for all those biologists who are not suffering from a residue of antique notions concerning the "dignity of Man" and the "transcendental quality of Human Reason." What these terms mean or why they should be adorned with capital letters, we do not know. Neither can we follow the logic of the biologists mentioned when, with these terms for the basis of their argument, they proceed to show, at least to their own satisfaction, that "Man, with his divine gift of Reason, his noble instincts of morality, and his lofty intellect," is moving forward to some "high Destiny"—the precise nature of which "Destiny" is left open for the imagination to fill in at its pleasure and leisure.

When we look at a Bushman, or at a steatopygous Hottentot, our conceptions of the loftiness of "Human Reason" are not so highly inflamed. At least we are made more thoughtful. And if we find that the brain of a Goethe is somewhat different in size, and in certain details of its structure, from that of Bushman and Hottentot, we may safely conclude that the difference is a *specific* one and is to be valued accordingly.

Natural selection produced the brain of the negro; and natural selection, it will not be denied, produced the brain of the so-called Caucasian. If difference

there be, it was natural selection that produced it; and if the brain of the negro is to be worked up into a cerebral structure like that of the Caucasian, it must be natural selection that shall cause the change. What ground is there for believing that any process of this kind can ever take place? We are convinced that there is none whatever.

The relation of structure to function is general throughout organic life. We touched upon this subject in Chapter VI when we discussed the comparative complexity of individual organisms and of social groups. A simply constructed organ can have only a simple function. The structure of the heart, for example, is simple when we compare it with that of the eye, and the function of the heart is correspondingly easy to understand. The heart is a pump, built upon a principle of hydraulics by no means complex when compared with the intricate principles of optics explaining the action of the eye. The same logic holds true of the brain.

It should be remembered, however, that of two brains of equal complexity, one will function differently from the other if it be taught the use of different tools. And if one brain be taught the use of many tools, and the other of only a few, the one brain will function more adequately and more intricately than the other. Here we can plainly see the dependence of the quantity of brain function upon the quantity of wealth placed in the hands of the man.

But when we find that equal opportunities in the way of wealth produce *unequal* results in the intelligence of two different races of men, we are led to the conclusion that this fact must be due to some inher-

ent variation, one from the other, in the cerebral apparatus of the races concerned.

Let us give a concrete example of this somewhat abstract statement. In the United States of America the negro race is very backward in developing individuals of high mental power. This is a fact of such commonplace note that when a negro exhibits the intelligence of even the ordinary cultured white man, some considerable surprise is manifested. Of the many, many millions of negroes who have lived and died in the United States, the number of those who have risen to even mentionable fame can be counted upon five fingers or less. And all these have been at least half white. Of pure negroes there is not one who is noteworthy.

On the contrary, there are thousands of whites, born and reared to youth in circumstances quite as poor as those of the majority of negroes, who have yet risen to foremost places as men of intellect. And millions of other whites — born and reared in similar poverty, with no better advantages than most negroes — have yet developed intellectual capacity of a kind that is never developed by a pure negro. The poor white man — whose father cannot read — wins superior intelligence by the use of simple things which, in the hands of the black man, lead to comparatively no results at all. This is a matter of fact.

The social inequality of the negro has nothing to do with the matter. The negro has a society of his own. The wealth of the community is open to him as it is to the white. He can use it for his own improvement if he have the capacity to do so. He had the use of much of it while he was a slave. He

has had free access to it for nearly half a century. He can buy books for his wealth, or he can save it, instead of squandering it like a savage. And by saving it, or by using it as the poor white man uses his, he could develop his intellect as the poor white man develops his own. Why has he not done so?

It will not do to say that the white man has had the advantage of a long line of ancestors who have *transmitted* to their offspring a brain of increasing proficiency. This will not do at all, for it is only a surrender of the point contended for. The assumption is that the negro and the white man have brains precisely alike, and that the difference between their mental capacities is due to the circumstances of their wealth.

If this be the truth why is it that wealth which is, at best, only a slight stimulus to the mind of the one, becomes a powerful stimulus to the mind of the other, when applied in circumstances precisely the same?

There can be only one conclusion. It is the conclusion for which we have been contending; and we may state it by saying that natural selection *has* developed an important difference between the brain of Caucasian and African, and that in that variation of organic structure lies the key to the intellectual backwardness of the negro race.

Yet it may be argued by some that, even if we grant this structural deficiency, the negro can still be brought to a level with the white man by means of a gradual development through successive generations. Nothing could be farther from the truth. A development of this kind would mean very much

more than may be supposed. To produce it, the entire natural history of the negro race would have to be developed over again in an environment in all respects the same as that which has developed the races of men we call Caucasian. This, even if we grant that the two races have sprung from the same parent stock of pithecoïds.

But is not this an impossible conception? The history of the racial environment of the negro is written upon his brain, upon his hair, upon his skin, and upon his bones; and by no lapse of time, or any possible change of environment, can that history be altered so as to produce a creature like the Aryan or the Semite. The negro was produced by a succession of causes and effects working through long ages, with infinite complexity of relation, in a flowing environment long since and irrevocably vanished. The same is true of the Caucasian. The two races occupy the extreme ends of two diverging lines of growth; and until man, by artificial selection, can produce a lion by breeding cats together, we may as well abandon hope that the brain of a Goethe can be produced from a stock like the Zulu or the Hottentot.

Our conclusion, then, rests upon the sound and safe theory that complexity of convolution determines inherent capacity for thought. We have shown, furthermore, that to say that mere wealth can convert the Zulu brain into a structure like that of the Caucasian, is a pure assumption unwarranted by observable facts, and disproved by known ones. Moreover, we have shown the unassailable warrant we have for rejecting the view that a few generations of transmission can obliterate a divergence caused by ages of

development. But we are here especially concerned with this question. For if it be true that the negro and other species of inferior men cannot use the wealth of the Caucasian with Caucasian intelligence, a very serious objection to our law of social growth might appear as a result. If equal stimuli of wealth produce unequal mental energy in the Caucasian and in the others, the inferior races would be exempt from the action of the mental check to population, and would soon outstrip the superior races in number. The superior races would soon be compelled to eliminate the inferior by artificial force, or face, as an alternative, the danger of being eliminated themselves. Are there no facts to support a third hypothesis?

We believe that this question can be answered in the affirmative, and that the facts are to be found in that very inferiority of brain capacity which appears at first sight to be the heart of the difficulty. The basis of our entire argument from the beginning has been that man is no different from other animals in the motive functions and forces of his life. We have founded our theory of population upon the observed facts of animal life in general and not upon facts observed in man alone. This was of course necessary from the premises we laid down in Chapter II.

If, now, human fertility be determined, primarily, by the exercise of the brain, and secondarily by its size, the same law must be found in animals other than man. For proof of this we need go no farther, if necessary, than the phenomena of fertility as presented by wild animals in captivity. These rarely produce young; so rarely that a birth is always the occasion of unusual remark.

Wild animals in zoölogical collections are cared for with every solicitude. No energy whatever is expended by them in securing food. The quantity and quality of their nutriment are in all respects ample for the needs of propagation. Why, then, do they not propagate?

The question is answered at once if we consider the quantity of mental energy expended by them. Carnivorous animals in captivity are proverbially restless. And this restlessness is due to no other cause than that found in the extreme difference of their new environment from the old. The muscular activity exercised by them when feral is more than compensated by their cerebral activity in the circumstances of their new life. We could conceive of a race of domesticated lions or eagles, if men could capture a sufficient number of either species to produce sufficient young to breed together under domestication. But men have not tried to accomplish this result, either because they could never capture lions or eagles in sufficient numbers, or because the motive to do so has been wanting.

In applying these facts to the savage races of men, we will discuss the American negro as an example. In the United States the negro population has increased out of proportion to the white population. For although the number of negroes has not been enlarged by immigration, the number has doubled in the forty years since the emancipation, whereas the number of whites, with the help of immigration, has not increased by a very much greater per cent. If, however, we account for part of the increase of the negro population by miscegenation, the disparity will be reduced, as all persons of negro descent are

counted as negroes. But this reduction will not be very great.

These facts assume grave importance when it is pointed out that all but an insignificant part of the negro population has been confined to the old slave states south of the historic line between Maryland and Pennsylvania. That part of the negro population north of the line has not increased proportionally. Comparatively few negroes have removed to the North during the past forty years, and such as have removed have not maintained the ratio of increase. On the contrary, that ratio has steadily declined. Why?

When the negro of the South removes to the North, he must do so at the expense of a change in his environment which taxes his mental energies to a high degree. The principal occupation which is open to him in the South is closed to him in the North. Northern agriculturists do not employ negro labor. The negro is hence compelled to live in cities, and to adopt occupations which require mental exertion of a more active kind than that used in the agricultural fields of his former habitat. The negro of the North is a more capable man in every respect than his fellow below the old slave boundary line. He is more moral, more æsthetic, and more intelligent. *But he is less fertile.* The character of his environment causes an increased activity of brain. The more prosperous and progressive he becomes, the smaller is the number of his offspring. So that we see that in the North, where the negro is a comparatively capable and well-educated citizen, the birth-rate of the race constantly diminishes. If it has increased in the South,

it is only because that there the negro has remained in nearly the same environment to which he was first brought as a slave who could perform the tasks of slavery and multiply his number at the same time.

If wealth is to increase in quantity and diffusion in the southern states, the negro must share in the process, as he has shared in it up to the present time. It is only in recent years that the industries of the South have begun to change their character. Year by year the quantity of manufacturing capital there has grown; and it is growing more rapidly now than ever before. The effects of this new wealth upon the southern negro have been very perceptible. Books are found in the cabin of the former slave, and they are read by him and his children in ever increasing numbers. His inherent capacity for the use of wealth which stimulates cerebration may not be, and probably is not, as large as that of the white man. But if this be the fact, it is none the less true that use of the brain has the same effect upon the negro as it has upon the white man, the elephant, or the lion. If the labor of the South is to be done by the negro, and if that labor is to be largely of a manufacturing kind, black agricultural labor will flow into factories. It is flowing in that direction now. The repugnance of the black man to industrial effort is overcome, as with the white man, by the higher wage. But this higher wage is bought at a price involving greater mental exertion. Out of the greater wealth flows larger desire for knowledge, and this twofold energy is expended at the expense of propagation.¹

¹The United States census for 1900 shows a remarkable falling off in the increase of the negro population of the cities in the border states

Where must this process stop with the negro? Other things being equal, precisely where it must stop with the white man.

But other things are not equal, and never can be. For the environment of the superior races must be imposed upon the inferior ones. The Caucasian brain has been developed by natural selection acting through ages and by instruments long since passed away. These races are really diverse, — not *so* diverse as man and anthropoid, — but still diverse in a measurable degree. Centuries of contact with European civilization in America has not produced a single negro with a brain as capable as that of the white man who is below the average of his race. The negro has produced no civilization himself, nor can he adapt himself fully to the civilization of other races. He does not understand the wealth which the white man creates and uses. Mere existence in the midst of that wealth cannot produce a change in his brain equal to that produced in the brain of the Caucasian by a process which began ages ago, the conditions of which have long since vanished, never to return. If we suppose that this change could really be wrought by mere association

— in spite of the higher birth-rate. The educated negroes of these cities are emigrating in large numbers to the cities of the North, where the demand for their labor is more brisk and more remunerative. The increase in the negro population of the northern cities is hence out of proportion to the birth-rate there. On the other hand, the increase of the white population in the southern states is out of proportion to the birth-rate among the southern whites. These facts show that the border negroes are flowing northward, and the northern whites are flowing southward—an ideal state of things for the “solution” of the vexed “race question” in the United States.

with superior men in new environments, we should be compelled to suppose that the same forces would serve to develop the brain of the anthropoid or the dog.

But the dog has an advantage which the inferior man has not. He is not *compelled* to exercise his brain by using the environment of man in order that he may survive. And not being so compelled, he is enabled to propagate. But if we suppose that the dog, the elephant, the horse, or any other domestic animal were forced constantly to exercise his mind to secure the food which sustains him, we can easily conceive that his fertility would decline and that the race would be eliminated. This is the force which must act upon the negro and with continuously increasing power.

No other conclusion is to be drawn from the premises. For it should be clear that the least adaptable of the race would be the first to disappear. If the environment would remain constant, the more adaptable ones would survive and multiply. But the environment would not remain constant. It would ceaselessly change to higher degrees of complexity. To these changes the more intellectual white man would be rapidly adjusted. But as soon as the complexity of environment would pass the limits of the negro's capacity for adaptation, the negro would rapidly disappear.

What we have said of the negro in America will apply to all inferior races when we conceive of the new environment as being forced upon them by conquest, or by those circumstances of industry which shall compel the more general use of the implements

and economic methods of civilization in those localities now occupied by inferior men.

We do not disguise from ourselves the tremendous character of the conclusion ; but we are forced into it by the logic of our theory. If we have made an accurate analysis of social forces, the conclusion is clear and inevitable. That it is borne out by observed facts, an examination of the effects of civilization upon inferior races will undoubtedly show.

In New Zealand, where the aboriginal Maoris have exceptional advantages of equality with the Europeans, the number of this race has steadily declined. That decline has been so rapid as to cause unusual comment. Of the inferior races, the Maoris of New Zealand are notably conspicuous for their adaptability to the civilized state. They quickly assume the manners and the language of Europeans ; they mingle with the British freely, their children learn rapidly, and they are remarkable for the intelligence and the entirely "civilized" character they acquire by free contact with the Anglo-Saxons and the Celts. Yet their number is so rapidly diminishing, in spite of all these advantages, that their total elimination is but a question of a short time.

The causes obliterating large numbers of other such races are not present with the Maoris. They are industrious, cleanly, and healthy. They are given a perfectly even share in the representative government, and take a keen interest in public affairs. Here we have ideal conditions under which to test our theory of population.

In New Zealand, as we saw in a preceding chapter, the diffusion of wealth has progressed farther than in

any other civilized group. There, too, government and capital are united over the largest areas, and in actual contact. And when we place these facts against the rapidly growing elimination of the smaller-brained, less intellectually capable natives, we cannot fail to see how perfectly the facts and the theory coincide. If ever an inferior race was placed under the ideal conditions of rising to equality with the Caucasian, the Maoris of New Zealand are that very race. And yet we see how they have failed. Why? Because the very advantages placed in their hands operate so as to stimulate them to mental energy out of proportion to the limitations of their vitality.

Possessed of a brain developed by a simple environment, and by a simple form of wealth, they cannot adapt themselves to an environment of another order without expending an undue proportion of mental force; and in doing this they necessarily limit the nervous force expended in the process of propagation. The Celt and the Teuton pay no such penalty because the wealth they use is their own, created by their own mental energy, and hence productive of no more exacting mental demand than the European brain is capable of meeting.

A somewhat similar, though not so thoroughly nice, illustration is found in the Hawaiians. These people are not so industrious as the Maoris, but they are very like them in the way of mental capacity. They, too, are rapidly succumbing to their contact with European and American civilization. The rapid decrease of their numbers is not accounted for by the presence of disease, native and imported.

The conditions in America are, as we have seen,

favorable to our view. The prevalent notion that the North American Indian is dying out is a perfectly false one. Since 1860 the number of Indians has considerably increased. But the Indian does not use the environment of the white man. He does not become "civilized." He lives very much as his ancestors have lived. What would happen were he forced to earn his livelihood as is the negro of the North, we cannot positively say. But we should hardly look for a development in the American Indian that has never been found in other savage races upon which the environment of civilization has been forced.

When we consider a people like the Chinese, or Japanese, we are disposed to modify our conceptions, in so far as these races are themselves capable of producing a civilization of their own. But Mongol civilization is not to be compared with European civilization. China must either go farther than it has yet gone, or inevitably come into conflict with the West. She cannot hope to live on with priceless natural wealth lying untouched in her soil. She must either develop it herself, or stand apart while others, more capable, do the work.

China cannot escape the tide of progress flowing to the Orient. Peaceably or forcibly she must submit to western domination. That can only mean the transformation of China's wealth into a wealth like that of Europe and America. Her industrial and agricultural resources must be worked up by modern instead of mediæval methods. The desires of western men for larger economic liberties demand it. The growth of invention and industry demand it. Political

expansion, growing out of these causes, demands it imperatively. And it is demanded by the moral force of western peoples, whose comforts are interfered with by Chinese obstinacy and ignorance.

It is an odd perversion of moral ideas to hold that the Chinese have a *right* to live as they please just because they were first on the ground. This view would stop human progress at its very fountain and source. If the Chinese have a right to live unmolested on soil containing useful wealth which they refuse to develop, so has a tribe of savages in the heart of Africa. If the *rights* of American Indians in this respect had been in force, where had been the civilization of the Americans of to-day? China can very readily assert and enforce her rights to be let alone if she can devise instruments of civilization such as Europe has invented. Let her mine her mineral wealth, improve her agriculture, and take her place in the family of nations, and nobody will disturb her. But if she cannot do this, she must allow the other members of the family to help her peaceably if may be, forcibly if must be. And as soon as she does this the Chinese brain will be placed in the scale and measured against the brain of the Caucasian.

Such are the general conclusions to which we come in our universal application of our law of population. From these conclusions it would appear that the so-called Caucasian races—the so-called Aryan and Semite—are to make up the social compound of the future. There need be no ethnical mixture of these two divisions of man; for Aryan and Semite live together now, socially, on terms of perfect economic

and intellectual equality. We can imagine that other races of men will survive. But they must be separated from the Caucasian by gaps like those which at present separate the Eskimos, and the inhabitants of certain parts of the tropics, from civilization. These may live on as long as the superior races do not desire to inhabit the Arctic or the torrid zone. That probability is remote, but should it ever eventuate, the last remnant of savagery in man must disappear.

In our discussion thus far we have anticipated a conclusion which properly belongs here. We assumed an equilibrium in population as being conceivable following upon the socialization of capital. But the reader probably observed that, in accounting for the theoretical equilibrium, we admitted into our calculation a perturbing force. This was the variable capacity of the individual due to the varying size of the brain. For it might be urged that if the brain varied in size, the capacities of the small-brained persons would not be able to meet the requirements of the convolving environment; hence, like the inferior races, they would be eliminated, and hence the brain of all would have to be perfectly equal if the norm of population would remain constant.

The force of this objection would be unassailable if we could conceive that the small-brained individuals would propagate only among themselves, as we have assumed would be the fact with the inferior races. But the very opposite of this is the truth. The Caucasian races propagate together and very seldom with any other race. We saw that sexual selection would cause the brain of woman to increase in size

because the less intelligent women would be moved to select the more intelligent men. In this way the smaller-brained women would disappear. This process is actually taking place now, if we are to trust to deductive reasoning. But the elimination must go on until the brain and stature of the two sexes are of the same size, or very nearly so, the brain of the man being slightly larger than it is now. The variation in the intellectual capacity of the type would then be so slight *as to make intelligence no longer a sexual selective force*. But just so soon as this takes place, there can be no longer any decrease or increase in the size of the typical brain, because such variations in intellectual capacity as would then exist would not be seized upon. In other words, the intellectual capacity of all would be equal so far as sexual selection would be concerned. But this could only mean that the widest departure from the average would be an almost immeasurable quantity. The result would be a race of which the individuals would be intellectually alike and hence equally fertile.

We should not forget that the term "equality of intellect" as here used means equality of quantity and not of kind. We do not say that every individual would be the equal of every other in all kinds of intellectual capacity. It should be clear that, owing to the variety of wealth and its uses, some intellects are more proficient in some way or ways than others. Thus the man who uses wealth which develops mathematical ability, will be a more proficient mathematician than he who uses another kind which develops musical ability.

We cannot compare different orders of things in

quantities which have no common term. Thus we cannot say that Adams was a greater mathematician than was Wagner a musician, or Shakespeare a poet. Hence we cannot say that the intellectual capacity of Adams was greater than that of Wagner or of Shakespeare.

But if we suppose that similar kinds of intellectual capacities can be compared together, we *can* draw a comparison between two diverse intellects, if we use a common term for the purpose. Thus, if we suppose a man to be an excellent mathematician, and at the same time an excellent musician, we can compare him with Adams, on the one hand, and with Wagner on the other. And if we admit that Adams be the standard for mathematical ability, we can compare the total capacity of the supposititious man with that of both. If he have half the capacity of Adams for mathematics, and half that of Wagner for music we can say that his total capacity is equal to that of either, and hence that the total capacities of the three men are equal to each other.

We can, therefore, conceive that while the brain of each would be very nearly equal to that of others the variety of capacity for various arts and sciences would be measurable by the variety of wealth which would serve to develop the capacity born in men for special pursuits in life. Opportunity in the use of such wealth is the determinator of that development now. And the only difference between the present state of society and that of society in equilibrium, is that found in the diffusion of the wealth which supplies the opportunity needed.

Such equality of brain and capacity would make

the human society possessing it precisely like a society of hive-bees in all basic principles except one. The working bees of a hive are very nearly alike in capacity, moral, intellectual, and reproductive. But the bees which propagate the race are very *unlike* the workers, anatomically and functionally. The reproductive bees — both male and female, that is, the queens and the drones — exercise their nervous and muscular apparatus in the lowest possible degrees. They do no labor whatever, leaving nutrition free to flow to the vital, or sympathetic, organs at the expense of the sensory ganglia. This fact insures the certainty of propagation in quantity large enough to maintain the race, and small enough to maintain the equilibrium of population.

But with human society in equilibrium, the motive for mental exertion would be equal in all, because of a variety of wealth not possessed by the bees. The function of human propagation is not delegated to special numbers or kinds of men, but is exercised by all alike, and is one of the most sacred of social rights. Therefore, with equal intellectual capacities, and equal motives for intellectual exertion, the number of offspring from united pairs would be equal also. This number would vary slightly from the average in some pairs, but only in the degree in which the brain itself would vary. And as this variation would constantly correct itself, through the absence of selective value in intelligence, the total number of the population would be corrected also.

We have now considered all of the aspects of the equilibrium of population except two. The first of these is the actual number of the human race after

capital shall have been socialized and after all of the inferior races shall have been eliminated.

It should be remembered that growth increases as maturity is approached. The momentum of social motion becomes greater as the equilibrium is neared. Therefore the checks to population multiply with increasing growth and diffusion of wealth. Hence we should expect that the completion of maturity will be very rapid in all aspects, as the Caucasian societies of men progress. Backward races of Caucasians must be drawn rapidly into the current of social forces, as methods of communication and methods of industry spread abroad. And as these races are compounded into the social characters of the European races, the world's norm of population must be speedily reduced or elevated to its equilibrial state.

But this equilibrial number cannot be much greater than the present population of the world. This we would conclude from the number of offspring borne by the more highly intelligent persons. Of course nothing like precise calculations can be made in this respect. But general observation would seem to indicate that if the equilibrial number shall not be very much smaller than the present total population, it cannot be very much larger. This question is involved, and necessarily, in the question of the economic equilibrium. The future stable number of human population will depend upon the number of survivals as human society nears its final state of socialization. If the number be larger than it is now, it will continue to remain so; if smaller, smaller it will continue to be. This truth should be clear from what has been said above. For if diffusing

wealth acts as a check to population for some, it acts as a stimulus to others, until use and quantity of wealth set up the reaction.

The remaining and last aspect of the reproductive equilibrium is that which concerns the numbers of the sexes. It is evident that if, of the number of new individuals produced, there should be progressive decrease of one sex, the race would disappear. The intimate biological causes of the determination of sex in the mammalia are not known. But we have no need of such knowledge to be assured that no such disparity in the number of the sexes could be developed. Whatever these causes may be, it is known that some individuals produce a larger number of one sex than of the other. Some pairs produce an equal number of both sexes ; some produce offspring of one sex only. But the male transmits all of his male characters to the male offspring, and the female all of the female characters to hers.

Now if one of these characters be greater fecundity in the production of one sex rather than of the other, this fecundity is passed down to the male or female offspring, as the case may be. And as this particular character has no value for natural selection, it is left free to correct itself by the indiscriminate mingling of all degrees of this kind of fecundity ; so that the number of males and females remains constant in proportion, that proportion being as one is to one, or as equal quantities are to each other.

We would be warranted in this conclusion by one great fact, everywhere observed, if by no other, namely, that the number of males and females of the human race is equal always in those societies which

do not practise infanticide for the purpose of suppressing the increase of one of the sexes. And if the play of natural forces now operates so as to produce equal numbers of both sexes, we cannot conceive how it can do otherwise so long as the essential nature of the process remains unchanged.

Thus, to the other characters of equality in the reproductive equilibrium, we are to add this last and necessary one. Its necessity has been evident from the beginning, but we reserved it for the last because of its universal existence now and in the past.

We cannot conceive of the economic and reproductive equilibrium we have described without, at the same time, conceiving of an equilibrium in the intellectual and moral nature of man, individually and socially. In other terms, the individual man would be *perfectly* adapted to the social state in which he would live. His capacity for the use of wealth could not be increased, because he would have the use of all the wealth which his capacity could absorb. He would be intellectually and morally perfect because the standard of perfection would be the type, and not the exception. One man would not be more moral than others, because the motive to morality would be equal in all. One could not be more intellectual than others, because the size of the brain of each would vary imperceptibly from that of the others, and because the stimulus to the use of the brain would be equally powerful in all.

Such slight variation as would exist would constantly correct itself, because it would offer no advantage to be seized upon and developed by natural selection. The physical and intellectual character of

man would be very little different from what it is now. That difference would be one of quantity, not of quality. At the present time, the moral and intellectual characters of civilized men vary in high degree because the quantity of wealth possessed by individuals varies in like degree. If the average man is less moral and intellectual than some exceptional men, it is because the average man is comparatively poor. And if he be *more* moral and intellectual than other exceptional men, it is because his moral motives are more nearly in equilibrium with his economic motives than are those of the exceptionally vicious.

With the diffusion of wealth the motives of all are brought more nearly to a common level. Efficient methods and implements of communication constantly facilitate the establishment of this economic-moral equilibrium. Crime decreases as the diffusion of wealth progresses. It must vanish when the diffusion becomes complete and continuous. These various equilibria in the vital, economic, intellectual, and ethical processes of human life are *social* in their character, and are produced by the action of the law of capitalization as it expands the areas of wealth with which government unites.

But the socialization of wealth used as capital facilitates the use of capital by the individual, and this private use of capital reacts upon the process of socialization, generally, by developing in men the special aptitudes which they inherit from their ancestors. Thus the process of capitalization which multiplies public wealth, multiplies private wealth also. Social wealth, ever flowing to private uses, causes an overflow of social producers into the category of pri-

vate producers. Wealth, being the stimulant to special capacity in the arts and sciences, would cause, if freely diffused, a rapid selection of occupation for which the individual is best fitted. For no man selects and pursues an occupation which is difficult and painful, when he is free to choose one which is easy, and hence pleasurable. But if his wealth be large and varied, he will use that part of it the use of which gives him pleasure, neglecting to use that part of it whose use gives him pain.

Thus we can conceive that, with continuous and complete diffusion of wealth, men would be rendered more proficient in all their capacities, and that the number of proficient men would constantly increase, until proficiency in all would be brought to its highest possible degree. The products of social capital would be characterized by their utility with due regard to beauty; those of private capital by beauty with due regard to use. But in both kinds of product, utility and beauty would increase together, until the lowest utility would be matched with the highest possible degree of beauty, and *vice versa*.

There can be no cessation to the action of the increment of capacity as long as there is any wealth remaining to be socialized. This would mean that there would be no longer any increment of desire in the individual. But the social increment would only be increased by this disappearance of the individual increment. Economic purposes fully satisfied, society is left free to act from motives other than economic. Social purpose then shifts to moral, intellectual, and æsthetic purposes, and progress goes on with the concomitant shifting of the moral sense to intellectual

and æsthetic standards. So it is that the sense of right and wrong no longer pertains to life and property when life and property are perfectly safe from harm. Moral standards are then only the gauge of art and science, and the moral man must then feel repugnance to ideas which are contrary to known or demonstrable truth.

This kind of morality is now the general character of scientific men. To assert, as being a fact, something which he cannot demonstrate, is as repugnant to the genuinely scientific man as would be a cruel and unnecessary lie to the man of generous and just impulses. The scientific man has discovered that deception of any kind surely defeats itself sooner or later. But the scientific motive for truth-telling has nothing to do with this fact. Its root lies deeper. For the *purpose* of science is alone the discovery of truth; and if truth remains hidden, no quantity of deceit, conscious or unconscious, however large or skilfully wrought, can disclose the hiding-place. But this moral character of scientific men would necessarily become the common character were the majority of men imbued with the scientific spirit. Without evasion, equivocation, or palliation, to say, "I do not know," requires the strength of a highly intellectual and delicately moral nature. Many men now believe many things because they do not know many facts bearing on the matter of their beliefs. But were all men intellectual enough to be intellectually moral, they would be less liable to practise unconscious deceit upon themselves, and they *could not* practise conscious deceit upon others.

The intellectual man cannot deceive himself. The

moral man cannot deceive others. But if the intellectual man be moral also, he can deceive neither himself nor others from any conceivable motive. If asked a question which he cannot answer, he must reply, "I do not know." Belief without evidence is self-deception. And to teach to others beliefs for which evidence is wanting, is self-deception upon a social scale. But to teach a belief of which the teacher has no evidence, and in which he himself does not place faith, is a practice impossible to the intellectual man who is also a moral one.

What we have said of scientific ideas is applicable to æsthetic ideas. That man who is proficient in one art can have no desire to practise another in which he is not proficient. For æsthetic effort, like scientific effort, is directed toward excellence of achievement. The purpose of the artist is to produce a thing of beauty, and if his efforts can result only in the production of things ugly, as compared with the products of others, all motive to action is taken away. The higher his proficiency, the more repugnant to him will be the idea of producing anything in which his highest expression is wanting. To pursue art for anything but the satisfaction the product gives to the æsthetic desires of men, is as repugnant to the *true* artist as would be charlatanism to the true man of science. Whenever the artist produces for commercial purposes, the quality of the things he creates is low in æsthetic value. And the same may be said of the man of science.

The highest achievements of art are those in which the utility-value, save for æsthetic purposes, is lowest. And this is true, also, of the highest achievements of

science. The practical uses of a musical composition, a statue, a painting, or a poem, may be said to be the same as those of the discoveries of Newton's law and similar generalizations of scientific thought. The æsthetic man, who is also a moral man, cannot pronounce bad art to be good art. If his æsthetic knowledge be inadequate, he may deceive himself, and unconsciously deceive others. If his moral nature be inadequate, he may deceive others while he himself remains undeceived. But if his moral nature and his æsthetic skill are both adequate, he can deceive neither himself nor others from motives of any conceivable kind. Therefore the unproficient artist, if he be a moral man, feels repugnance to the idea of deceiving others with products he knows himself to be unworthy the value placed upon them. If he produce for economical purposes, his moral sense may not be painfully pressed upon, but he will recede from the highest standards of art, and his æsthetic nature will suffer a corresponding depression.

As society progresses toward this multiplex equilibrium, the mechanical nature of its life process becomes more clear. A wealthy and democratic community, with highly efficient methods of communication, acts with quickly coördinated impulses, not unlike those of the individual. The impulses of each is the impulse of all. The action of each, either personal or by proxy, is the action of all. Common moral motives produce uniformity of conduct. While individuals tend to vary, variations tend to be compounded into the type. The idea of the right to live being organic in such society, the right to the means by which life is sustained becomes organic

also. The individual surrenders to the state only when surrender best serves the individual good. The state surrenders to the individual only when surrender best serves the good of the state. Surrender by both individual and state is mechanically necessary because it is economically good; and because it is thus good, it is morally right. With this equilibrium of the state and the individual comes the equilibrium of intellect with morality and of beauty with utility. Next in importance to the repugnance to pain inflicted on the individual body is the repugnance in the individual mind to ideas of pain inflicted on the body social.

With social consciousness continuous and complete, there can be no self-deception, individually, and no conscious deception socially. The individual who is intellectually moral is also scientifically truthful. He cannot be otherwise. And the individual who is economically moral is also economically just. He cannot be otherwise. For if he perceive that an injury to another is an injury to himself, he must be just to others that he may be just to himself. And no truth could be clearer, no perception more forcibly plain, than this perception and this truth in a society in which the right to the means of life would be equal for all.

If we conceive of human society having reached this twofold final equilibrium of economy and reproduction, we shall conceive of its having accomplished its twofold final purpose. That purpose is the sum of the purposes of the individual. The individual purpose is the amplest liberty for the basic functions of nutrition and propagation. And, for the indi-

vidual in a social state, that liberty is found to be best served when it is best served for all alike. The individual finds that the socialization of wealth of one kind facilitates the private use and private possession of wealth of every kind. Being rich, he satisfies every desire that wealth can satisfy. Being moral, he has no desire for acts which would be painful to others, because perceived to be painful to self. Being intellectual, he is truthful; for the desire of the scientific intellect is a knowledge of the truth whatever may be its nature. Being æsthetic, he appreciates proportion between utility and beauty. He can have no idea of superiority in the mere *persons* of men, for every individual is the social type of the race.

Thus in the realization of the final purpose of social motion, is realized the ideal of the economic, the intellectual, the moral, and the æsthetic man.

CHAPTER XII

MORAL EQUILIBRIUM AND CONCLUSION

THE intellectual development of the human race has been a slow and a continuous movement. Men have enlarged the scope and the quantity of their natural knowledge in very much the same way as that which has characterized the growth of language, the rise of the arts, and the progress of invention.

From age to age the sciences have multiplied in quantity and in kind, ever adding to their store fresh accretions of fact, and a more thorough comprehension of causes. Like the rippling of water into which a pebble has been dropped the movement of human thought has been always outward, spreading the circle of its action to farther and still farther confines, and pushing its way into regions before undreamed of and unknown.

The general purpose of science, if it may be said to have a purpose at all, is to reduce to harmony the phenomena of nature, or at least to *understand* the harmony which is supposed to prevail throughout the entire range of existence.

This notion of the universal harmony of nature is not a new one. It is one of the earliest perceptions in the history of human thought. The Greeks had it, the Egyptians had it, the Hindoos had it ages

before the Greeks were born. It underlies the noble ontology of the Brahmins, who conceived that the universe was one infinite, sentient thing, pulsing through eternity with a mighty rhythm of motion which they described as the "days" and the "nights" of Brahm — emanation and absorption, evolution and dissolution, activity and rest.

The earliest efforts of intellectual man were bent toward the discovery of the nature of this assumed universal harmony. The aspirations of intellectual men to-day are directed to the accomplishment of the selfsame thing. The existence of the harmony is assumed by all alike: by the theologian, who seeks to supply it with a cause in the existence and the doings of a deity; by the scientific man, who endeavors to account for it without that hypothesis; and by the metaphysician, who looks for its explanation in what he calls the nature of the "human mind." There is no dispute about the existence of the harmony itself. The only dispute is that which is concerned with its character and its cause.

In the search after truth it has been found that the methods of modern science have been highly successful. With the expansion of proved knowledge natural facts are progressively brought into clear and more causal relations with one another. The ripples of human thought are found to be really the cumulative effects of one general and continuous movement — to be only wider perceptions of simple facts and the relations between them. Scientific investigation only serves to make deeper and clearer our preceptions of the harmonious character of the universe, and indefinitely to extend those perceptions to ever en-

larging fields once supposed to be closed to the avenues of rational and human inquiry.

There are certain facts, however, which, in the minds of some, are still held to transcend the merely rational methods of investigation, and therefore to lie without the possibilities of simple demonstration. The chief of these are those phenomena of human life usually classified under the term "moral." Facts of almost every other order are eagerly submitted to the so-called scientific method, but the facts of *this* order are held to be exempt, the contention being that the moral nature of man can never be successfully analyzed by the implements of thought used with such brilliant success in other departments of knowledge. That method, it is claimed, must fail when applied to moral phenomena because these phenomena are of an order unique in all existence, and hence unapproachable by methods of attack to which phenomena of other kinds are seen to yield with more or less facility.

It may be remarked, in a general way, that the exactness of any science is dependent upon the regularity presented by the facts to be accounted for. In astronomy, for example, we are well acquainted with the laws of the solar system, because the movements of the planets are seen to repeat themselves, over and over again, with a measured regularity to be reckoned upon with certainty. The same phenomenon presents itself at recurrent intervals, and there is seen to be a continuous rhythm and harmony underlying all the varied actions of the planets.

But this regularity of recurrent sequence seems to disappear when we extend our observation to the

nebulæ and to the stars. We do not doubt that there is harmony in the movements of the stars as well as in those of the planets, but we must confess our inability to perceive it, at least in the general movements of the stellar system.

If we look at the question of man's moral nature in this light, it is probable that we can explain the reluctance of many thoughtful persons to include moral phenomena within the scope of exact science. If there is universal harmony in the moral nature of man, it is conceived by many to be so obscure as to defy all attempts at understanding it by methods commonly used to grasp the meaning of the other facts of existence. Therefore, it is argued, no exact science of morals can ever arise.

If it be held, on the contrary, that such a science is not only possible, but is even now taking shape, and is rapidly reducing the facts of man's moral nature to certain definite laws of action, it should be plain that any new perceptions of regularity in moral phenomena will be highly serviceable as a means of clearing the ground for a better understanding of all the facts as we see them. Let us inquire into this aspect of the question, and ascertain if the moral ideas of men, seemingly so incongruous and unproportional, can be reduced to anything like a perfect sequence of cause and effect.

The most sublimated notions of right and wrong may be traced at last to the intimate sense of *life* which men possess. Whether it be life here or now, or life hereafter, it is yet life. And as we can conceive of no *human* life without first postulating it as we know it here, the life here must be the principal element in all our considerations.

Now, if there is any universal fact which must be considered the prime material of moral science, it is found in the moral sense which men of all known ages and kinds have possessed in common. So far, we have an uniform and general basis upon which to build. But this universal fact presents so many and such varied forms that it becomes obscure when we attempt to make a closer examination of its minor phenomena. From these minor phenomena all regularity is apparently absent. Moral ideas vary in almost every one of their aspects. They seem to have no law of regular and recurring sequence either in space or in time.

That which is essentially right in one community is essentially wrong in another not very far distant. Communities separated by vast distances, and altogether strangers in kinship of blood, have moral standards very much alike; and this likeness is apparently not the result of communication between the two communities, nor yet of a common influence upon the minds of both. But this is not all. Individuals in the same community — even full brothers in blood — differ much in their conceptions of moral values. One will condemn conduct as being wrong which another will approve as right. In most communities, nay, in all, there are distinct moral codes for the two sexes. And, moreover, what is right for man and wrong for woman in some communities is wrong for man and right for woman in other communities. These facts go to show the irregularity, or obscurity, of moral phenomena in point of locality.

In point of time the same observations hold good. Various communities existing in the same age, or the

same year, have moral ideas which are very diverse ; whereas many communities now living have moral ideas very similar to those of peoples that have been dead for ages, and of whose moral concepts the existing communities have never even heard.

More than this ; the moral ideas of a community change from century to century, from year to year, and from day to day. This is true also of the moral notions of individuals. What an individual considers right in his youth, he may consider wrong at middle life and indifferent in his old age. There seems to be no universal standard by which we can measure with certainty the flux of moral opinion, or fix its movements to an unvarying law. The obscurity seems to be profound, and even hopelessly so.

If we look into the effects of religious belief upon moral ideas, the obscurity seems only to be intensified. Many are convinced that the religious beliefs of a nation are accountable for its moral opinions. They believe that it is religion which regulates morals, and that the difference in the moral ideas of communities is the outgrowth of various theological beliefs.

The fallaciousness of this notion at once appears when we look into the facts of history, or into the everyday life of ourselves. For communities of highly diverse religious faiths have very similar moral notions, and individuals of the same community differ in this respect likewise.

Two persons of the selfsame religious convictions will vary in opinion as to the moral value of certain conduct ; and two of diverse religious beliefs will perfectly agree with each other when the question is one of right or wrong concerning some special act. On

the other hand, an individual without religion of any kind will agree with the moral opinions of those who have religions of various kinds.

In this respect the relations of time and locality seem to have no importance whatever. Ancient peoples, with religions now long extinct, held the same moral opinions as do modern peoples with living theological systems.

To steal, to violate chastity, to dishonor parents, to kill—these things have been immoral since men began to leave records of their social life. To do any of these things has been wrong in civilized communities of all ages and in all places; in communities which have worshipped one god or many, and in communities which have worshipped no god at all. The moral valuation placed upon acts of this kind has been perfectly equal in the minds of Mohammedans, Jews, Christians, and Parsees, whose religions are monotheistic. The Greeks, the Romans, and the Egyptians, whose religions were polytheistic, held acts of this kind in similar moral detestation. And the same is perfectly true of the Buddhists, whose religion is positively *atheistic*.

Here we have an universal fact of extraordinary significance. If we are rational, we must assume that it must have an universal cause. What is it that makes the Buddhist, who has no god at all, agree with the Greek who fills the earth and the sky with divinities? Why is it that the Jew and Mohammedan, who detest a plurality of gods, are at one with the Christian, who believes in a triune deity, and with the Brahmin, who is a pantheist?

It would appear, now, that we are approaching

something akin to that uniformity in moral ideas which is the essentially desirable basis of a moral science. We find that all men agree as to the moral value of conduct which is seen to interfere with human life and its functions, and with the wealth which enables man to live in a free and happy state. Here is a basis of morality quite distinct from religious faith of any kind. All men value life and its pleasures. All men value the wealth which secures for them the amplitude of the life they love. All men are at one in the condemnation of conduct which tends to limit that amplitude, or to suppress the process of living. Moral ideas in other matters may be highly diverse, but in these they are always of a kind. As we approach nearer to the process of life itself, the phenomena of the moral nature of man become regular, more uniform, more perfect in their sequence of cause and effect, more harmonious in their relations to one another, and hence more easily susceptible to the methods of exact science.

Still there are many minor irregularities which appear in a considerable degree to obscure the phenomena, and it is to these we must now turn our attention. While all men seem to agree in certain fundamental conceptions concerning life and wealth, yet it is true that their conceptions in this respect differ vastly in different ages and in different times. How can we explain these minor variations? An answer to the question will be found in the *circumstances* of the wealth of peoples, or rather in the economic state peculiar to various communities. Inasmuch as one community varies from another in the quantity of its wealth and the degree in which

the wealth is diffused, in so much will it vary from the other in its moral notions concerning life and property. This law of moral science will be made clear if we consider it in the light of one of the most conspicuous facts of human history.

There will be no dispute as to whether or not the institution of slavery is a matter to be discussed *pro* and *con* from a moral point of view. Seeing that communities that have abolished it are wont to point to that fact as a guaranty of their very high notions of the rights of man, we may be sure that there is about slavery something highly repugnant to the moral sense of a very large part of the human race. One of the principal commendations made for its own alleged very superior moral character by the Church of Rome is the fact the popes have discouraged chattel slavery at all times, and have abolished it wherever they could. It was slavery that caused the civil war of the United States, and the institution is now held in abhorrence by almost all the civilized peoples of the earth. Yet it will not be denied that this social institution has been regarded as highly moral by many peoples in many ages, and it is still so regarded by some. We may arrive at the source of this difference of opinion if we arrive at the source of the opinions themselves, and for that we have not far to look. Slavery is approved by a community in which the institution is in force because slavery is an essential function of the economic life of the people. The slave is no more than an important part of the community's wealth. The moral ideas of the slave-owning community are inseparably bound up with its economic system ; and as the disestablishment of that

system is conceived to be harmful, the institution of slavery is held to be good.

But what is the state of wealth flowing from an economic system of this kind? Simply this, that one class of persons receive all but an insignificant part of the total wealth produced. The slave is given just enough to make his labor most highly productive and the master retains the rest. In fact the slave is no more than a machine which costs a certain per centum of the product for its maintenance in repair.

What, now, is the source of the moral abhorrence in which slavery is held by a *free* community? This will be a more difficult question to answer than was the other. In a free community there are somewhat different relations of wealth from those we have seen to prevail when slavery is practised. Laborers do not form a part of the exchangeable wealth, and their bodies are not bought and sold by the capitalists. Any laborer may at any time become a capitalist, and the ownership of any kind of wealth is open to him. There is no legal bond irrevocably uniting his body to the service of the capitalist save that which he himself freely makes and which is equally binding in law upon the man who employs him. These relations between wealth and men are seen to be very different from those obtaining under the régime of chattel slavery.

In these facts are found the source of the moral abhorrence in which slavery is held by a free people; for a free people cannot imagine the institution as being established among themselves without at the same time conceiving the possibility of themselves being slaves. But if this be true, its truth is due to

the free use and ownership of capital which have replaced slavery in every progressing community.

Here again is seen the intimate connection between the government of a people and its economic system. Government arises out of the industrial life of a political group, and we cannot conceive of the latter being changed without conceiving of a change in the former. The principles upon which a slave community is ruled are quite different from those regulating the life of a free people; and it is very easy to apprehend that this fact is altogether due to the difference in the diffusive character of the wealth of both. In the free community every individual has an opportunity of becoming a capitalist, and can thus become possessed of a share of political power; whereas in the slave-group the bondsman is himself but a part of the wealth owned by the rulers. Under the régime of free labor every possible capitalist is possessed of political power, because of the fact that he may at any time actually acquire capital; and in this way forms of government are constantly expanded to meet the progressive diffusion of wealth. The highest expansion of governmental form is found when bare manhood becomes the basis of sovereignty.

A pure democracy in which every individual is co-sovereign with all other individuals is the freest possible form of government. If women were given the right to vote in the United States, the government of that country would be one of this kind. And we may add that the only contention made for woman-suffrage is the fact that wealth in the hands of women is subjected to taxation.

The source of universal manhood-suffrage lies, there-

fore, in the warrant for assuming that the man is the owner of wealth, and hence has the right to rule. All that is needed for the American form of government to become the ideal of political equality is the extension of the suffrage to women. The moral code of every community is based primarily upon its political state, and hence it is seen that economic systems, governments, and moral codes are, at their root, one and the same thing.

If this be true, we should find diverse moral notions concerning slavery to be accompanied by diverse economic systems; and this, indeed, is the fact in all human history from its beginning down to the present time. Societies in which slavery has existed, no matter what their form of government, have never shared their political power with the slave. Under republic or monarchy, the slave, having no economic power, could have no political power, and the form of government, as well as its substance, has been, for him, the same.

Similar economic systems produce similar moral ideas. This is perfectly true of all societies regardless of their situation in time or in locality. The Greeks and the Romans resembled each other strikingly in their moral codes and in their economic life; whereas modern Italy differs from both in these two particulars. If we compare the moral notions of Australia, Canada, and the United States, we shall find them somewhat similar; more like to one another than any one of the three is like to England in this respect. The likeness and the difference are both due to the fact that the economic life of the colonies and the republic are more nearly similar than that of any of them is similar to that of England.

The truth of the general statement will be enhanced if we compare a savage community with a civilized one. Among all civilized peoples, living or extinct, it has been highly immoral to kill one's parents. But most savage communities pay scant respect to progenitors. The Eskimos slaughter their old precisely as bees do the useless drones and the superfluous queens; and they deem the practice a virtue. The Eskimo who would refuse to kill his parents when they became a burden upon the community, would be reprobated as an immoral member of society. In the United States, or in France, the practice would be inconceivably wicked. Why this striking difference? There need be no mystery about it at all. The Eskimo is poor; the European is rich. Give the Eskimo the wealth of France and his moral notions in this respect will probably change; for he does not kill his parents because his natural instincts impel him to do so, but because food is at a premium, and the aged members of the community are no longer able to assist in securing it. If plenitude of wealth does not work a like effect in hive-bees, it is only because the insect produces two thousand young per diem, whereas man can produce but one in somewhat less than a year. But plenitude of wealth is not without its effect upon the bee also. For we see that when, by a scarcity of queens, the existence of the drones does not threaten the life of the group, the drones are allowed to live in idleness and eat *ad libitum*.

All these things materially assist us in the perception of the harmony we have assumed to underlie the seeming discord of moral facts. When we note

that the Eskimo and the Englishman are moved to opposite conduct by opposite conditions of wealth ; that these same opposite conditions produce in the civilized American a moral nature which transcends the highest conceptions of the Papuan ; that it is conditions of wealth which make slavery right in one community and wrong in another ; that the moral notions of the German and of the Italian, of the Russian and the Arab, the Hindoo and the Chinese, the Monbutu and the Malay, are all of them determined by the economic state in which these peoples live, we can scarcely deny that the conduct of the bee, in so far as it appears to be moral at all, is produced by a similar cause. Why should we deny it, when we discover that in some societies of bees there is perfect freedom and perfect equality of wealth for all, while in others there is slavery ?

There is yet another order of moral facts of a seemingly more profound obscurity than are those we have just examined. The facts we have in mind are highly irregular in their sequences ; indeed they seem to have no sequence whatever. They appear to be independent of time, place, religion, wealth, custom, education, political systems, economic life, and social traditions. In a word they seem to spring out of some inborn force in human nature which defies analysis. These facts are the moral values attached by society to matters concerning chastity and marriage.

When we face these things, with a view to finding a cause for them, we seem to have really trespassed on the confines of a region with which we are wholly unfamiliar. There appear to lie inherent in the minds of human beings certain inalienable feelings concern-

ing the rightness and wrongness of sex-relations over which mere circumstances of wealth seem to have no influence whatever. The relations between the sexes are essentially moral, if we can apply that adjective to conduct of any kind. So profound is this truth that the meaning of the word "moral" in popular usage is almost altogether confined to matters of this peculiar character.

We may add that these moral feelings are not quite the sole possession of the human genus. They are observed also in many of the lower animals, though in less degree. Some species of mammals, other than man, disclose the passion of jealousy; and this passion is possessed in high degree by birds. Topinard remarks that conjugal fidelity is found nowhere so delicately appreciated as among birds; whereas the lion, if we exempt some slight deviations from the pathway of positive rectitude, is an exemplary and solicitous husband and father.

How can we explain these very obscure facts? How reduce these profoundly erratic phenomena of moral character to that harmonious proportion we seek as the basis of universal existence and action?

It would appear that the extraordinary and highly irregular nature of these moral phenomena should warn us that the harmony underlying them is not to be sought for upon their surface. The very profundity of their obscurity should invite us to examine all the more deeply into the most remote places for their cause; and we are convinced that by this method we will lay bare the highest source of the phenomena themselves. To do this we must go some distance from the main road of our inquiry.

Among living things, whether plant or animal, competition, of one kind or another, is the determinant of survival. Every organism, when surrounded by a plentiful supply of food, will absorb all the nourishment needed for the amplest possible life. More than this it cannot do; and less it cannot do, if it be not disturbed by competition with other organisms among which the food is to be divided.

What is true of nutrition is true also of propagation. The two functions are only two imaginary aspects of one continuous natural process of growth. Organisms multiply as rapidly as they can. But they do more than this. They tend to multiply more rapidly than is possible, just as they tend to absorb more nutriment than their natural apparatus can assimilate. If no force intervenes to prevent it, plant and animal will exercise the function of propagation to its highest possible capacity. Organisms which fail in the competition for food — whether the competition be active or passive — are eliminated; those which succeed survive. Likewise, organisms which fail in the competition for propagation are eliminated. Those best fitted — through some character of an active kind in themselves, or through circumstances — to bring the propagative cells into contact are the ones selected for survival and remain as fixed types.

As we ascend in the life scale, we find that the higher we go the better fitted is the organism to master the needs of survival; that is to say, the highest organisms are those which are least susceptible to elimination from the forces of competition. We find that some of the higher animals are favored with characters giving them unusual safeguards from

starvation. These higher animals have a psychic as well as a physical capacity for food. They can lay up stores of food and leave them untouched for future consumption. This psychic safeguard from elimination is produced by residence in a fixed place, and it marks off a wide gap between animals which have it and those which have it not.

But in addition to this psychic capacity for food—the means of life—some of the higher animals possess a similar psychic capacity for the means of propagation—that is, for members of the opposite sex. With many of the higher species,—with most of them, indeed,—the members of one sex compete for the possession of individuals of the other sex. This competition, too, may be active or passive. Most animals are ordinarily satisfied with temporary gratification of hunger. But some of the higher animals are exceptions to this rule. These have a psychic desire—a desire remaining after the motive to propagate has been, for the moment, removed.

Among living things man has the most complex brain, and hence his habitats are more permanently fixed, and his wealth more varied, than those of any other animal. His mental desires for wealth, not immediately used, are therefore the greatest among living creatures. And what is true of him concerning the means of life is likewise true of him concerning his means of propagation. The desire of man for the possession of a mate, or a number of mates, is larger in quantity and more intricate in kind than that of any other living thing.

This fact, we are persuaded, will account for all the varied moral ideas of man with regard to chastity

and to marriage. His capacity for possession of the means whereby he propagates is subject to the same law of increase as that which rules his capacity for wealth. It may be extended *ad infinitum* so as to include every member of the opposite sex; and in this indefinite extension of psychic desire — of a desire which, in its very nature, can never be satisfied — is found the analysis which probably explains that very mysterious phenomenon called "Love."

Man, like other living things, will not share with others the wealth that is absolutely necessary for his own bare existence. And he shrinks from a similar partition of the means whereby he reproduces his kind. If his desire to propagate were limited to mere physical capacity,—as is the case with most other animals,—he would have no moral ideas concerning sex than have these others. But the desire is not only physical—it is mental, too; and inasmuch as other animals exhibit moral notions concerning chastity, we are warranted in attributing the similar fact to a similar cause.

Given the basic cause of the phenomena, we see that some of the obscurity in which they have lain is cleared up. If we now regard the matter from the view-point of circumstantial wealth, the last of the obscurity will, we are persuaded, in turn disappear.

Some men have more intricate ideas of chastity than others. But the complexity will be found to be measurable by the complexity of the environment. Civilized groups always have higher notions of chastity than savage ones. Civilized communities are almost always monogamous; savage ones are almost always polygamous. But civilization is very largely

a matter of wealth and its variety and diffusion. With savages women are the mere slaves or instruments of men. The boast of Christian civilization that it is its religion which gives woman her high place is wholly gratuitous.

It is somewhat difficult to understand why Christian ethics should be considered the cause of woman's emancipation, when we know that for more than fifteen centuries woman was the mere chattel of her husband in Christian Europe. To those who contend that she was anything more we would commend a careful consideration of the *garde de chasteté*—a practice the bare mention of which is enough to stupefy the minds of moral men and women of to-day. Why did the gentlemen of mediæval Europe enforce this unspeakably abominable practice upon the wives of their bosoms? Shall we say it was because of Christian ethics? Because the Gospels had been proclaimed in Europe for a thousand years? or shall we take the more rational ground that it was because Christian ethics had no effect whatever upon the condition of woman?

But if you say that Christian Europe at that age did not *understand* Christian ethics, whereas we now *do* understand it, let us ask the cause of this highly remarkable fact. Why do men of the present age comprehend the ethics of Jesus so much more clearly than did their ancestors? Surely not because the Gospels are preached louder or more constantly to-day than they were in the Middle Ages. They are not. There is a thousand times more unbelief and a thousand times less preaching in Europe now than there was then.

But such discussion as this is idle. Europe is somewhat differently situated to-day in the matter of wealth than it was a few or many centuries ago.

On the other hand, if it is Christian ethics that has emancipated modern woman, what was it that emancipated the women of ancient Rome? The Roman matron and maid were as solicitous of their chastity as was ever a Christian woman now or in times past. They were just as free, just as much loved, just as much the object of veneration and of sanctified regard as are the women of America to-day. That is, among the Romans who were *rich* and *free*. And if woman, in general, is held in higher esteem in America and England than was woman in ancient Rome, may the fact not be due to the difference of the economic life of these peoples?

As woman becomes more free in the use and ownership of wealth, her freedom in selecting her mate is greater. She has never been without the desire of exclusive ownership of all the affections of her husband. Her mental capacity in that respect has always been equal to that of the man. In the moral estimation of woman, whether she be slave or free, polygamy has been always wrong. But her desires have not always been consulted. Her capacity for exclusive possession has not been left perfectly free to act. Her freedom in this respect is enlarging, truly, but this fact is the result of the larger economic liberties she is rapidly acquiring. It needs no argument to establish the truth of the simple fact that if a woman be rich she will have a wider choice of mates than if she is forced to rely upon the labor of a man for her livelihood.

In a wealthy community women can enforce a monogamous method of life with comparative success. A wealthy community can support a system of general and free education with little distress to the body social. And the community will soon learn the wisdom of public education once the method is tried. The intelligent man, of necessity, makes a more useful citizen than the ignorant man. And with equal advantages for both sexes, the resultant effects upon the economic life of the people must be profound and far-reaching. But the wealth which confers social freedom upon women likewise stimulates the mental energy of men. And as capacity for propagation is limited by intelligence, the more cultured man has a smaller functional capacity in this respect than has the less cultured one, and hence a smaller mental capacity. If his normal desires are satisfied with one mate, his mental desires are satisfied with the same number. He will desire no more than one; but the idea of sharing that one with others will be as repugnant to his mind as the idea of sharing food all of which is necessary for bare existence of self. In a social group wherein these circumstances similarly affect the majority polygamy will be immoral.

Ability to keep more than one mate has nothing to do with the matter, much as this notion is harped upon. In a community like England or the United States vast numbers of men are rich enough to maintain large harems. They are forbidden to do so by law, but they do not refrain because of this fact. They approve the law and would be the first to oppose its abrogation. It is true, of course, that most men in polygamous countries keep but one

wife ; but they do not condemn polygamy, because with them woman is the slave of man. Many of those who practise it do so only because the social code approves the custom ; in the harem there is always a favorite wife.

In all civilized communities illegal, or immoral, polygamy exists ; but those who indulge the practice are condemned by the social code. The practice is called "the social evil," and is regarded as the most painful and distressing phenomenon of civilized life. This kind of polygamy tends to disappear as woman becomes economically free. The number of women who resort to that method of gaining a means of existence is insignificant when compared with the number who engage in other pursuits. The method, too, is highly repugnant to those who use it. If honorable occupation were open to all women,—occupation which would be liberally remunerative,—there would be no "social evil." No woman will deliberately choose a profession which excludes her from association with her family, and society in general, when she is given an opportunity of earning a higher, or an equal, wage in an honorable way of life. This will be admitted by all. The professional courtesan is only an exaggerated example of the economic marriage. The only difference between her and the woman who marries, in a legal way, for convenience lies in the fact that the courtesan is the instrument of many men, while the economic wife is the instrument of only one. And in many instances the courtesan has the happier existence, if we eliminate her social disadvantages. The so-called "social evil" is a question of pure economy. If the source of it be removed, the institution will disappear.

Polygamy is thus seen to be attacked by two powerful social forces — a moral force in woman, and a psycho-physical force in man, which, itself, terminates in morality. Promiscuity is intensely repugnant to civilized men and women both. It is detested by men when women practise it ; and detested by women when it is practised by men. This detestation is as purely moral as is man's repugnance to murder ; and it is moral for the same reason.

In some civilized groups, ancient and modern, as the Egyptians, the Hindoos, the Jews, polygamy has been approved when one wife has failed to produce children. Husbands and wives have approved it then. But this custom is still in force in almost every Christian country. Incapacity to produce offspring is everywhere in the American republic a legal cause for divorce ; and divorce, with remarriage, is polygamy, or polyandry, of a kind. Yet so detestable is promiscuity to the majority of civilized people that divorces are seldom obtained because of the incapacity mentioned. Divorce for other reasons is a growing custom, and is most practised in the United States, where woman is most nearly the economic equal of man.

This apparent lack of morality is compensated by the fact that second marriages are almost always happy ones. The chief cause of unhappy domestic life is the economic bondage of the female. Women, for convenience, are compelled to marry men for whom they have no sexual regard whatever ; and this, in spite of the fact that the men may have highly undesirable habits. After marriage the sexual apathy of the wife turns to antipathy upon closer acquaintance with the

undesirable habits of the husband. The woman who loves a blackguard spouse seldom seeks a divorce. His value as a spouse is higher than his value as a companion. But when no such spouse-value exists, — when, in fact, there is marital hate rather than love, — the motive for separation has a twofold strength.

The comparatively poor classes practise divorce in proportionally greater numbers than the wealthier classes. This is due to the fact that the rich woman is almost always the selector. Marriages in which wealth plays no part at all are proverbially happy ones.

In ancient and less civilized groups the man divorces the woman — another purely economical fact. In modern civilized groups the initiative is equal for both sexes. There is thus a double incentive to escape from a painful environment. The number of divorces must decrease as women are left more free in their choice, and as intellect becomes more generally appreciated as an attraction in the mate to be selected. In America, divorce is freely resorted to because the social code freely permits the unhappy spouse to seek relief. The social code of Europe frowns upon the custom.¹

¹ The economic, political, and moral state of France presents an interesting study as regarded in the light of the theory of capitalization developed in this book. The reader will have observed that we have written of France as being less developed than is England. Some facts are in harmony with this assumption, others are in contradiction with it. The principal fact which seems to favor the supposition that France is really in advance of England is the greater number of French divorces — a number which is rapidly increasing. But the view that England is far the more advanced group is favored by more numerous facts. If the diffusion of wealth in land in France is greater than in England, we must consider that the wages of the English proletariat are higher than those of the French. A result of this is the abstinence

We have now considered all the moral ideas of men, so far as morality is concerned with life and property. We believe that the discussion has materially cleared up much of the obscurity in which these

from marriage of the French peasant, which would account for the stationary state of the population, and for the vastly higher rate of illegitimacy. Again, the question of the French tariffs complicates the question of wages ; for France, unlike the United States, can be compared with England in this respect. Then the character of French industry is highly agricultural while that of England is almost exclusively manufacturing. And we have seen that the manufacturing community has the advantage in wealth. French methods of legal procedure are proverbially less enlightened than are those of England. The community is more militant in spite of its republican form of government. Its industrial monopolies resemble those of ancient Rome, more than they resemble those of New Zealand ; whereas the government monopolies (local principally) in England are of distinctly *modern* character.

The difficulty, perhaps, may be made less formidable if we consider that in France there are really *two* social groups instead of one. Paris is very different in its social characters from the rest of France. Parisians practise divorce more freely than do the provincials. This fact seems to be outweighed by the counter fact that the percentage of illegitimate births in Paris is three times as great as the highest rate elsewhere in France. How can we reconcile this apparent irregularity ? I confess I do not clearly see a perfectly satisfactory answer. To say that France presents us with a social growth of an *abnormal* kind is only restating the problem. We should find wherein the abnormality exists and why. But such exceptions to general laws are not peculiar to society. They exist in the phenomena of the universe at large, as for example in dermoid cysts, in hexadactylous men, in the planetoids, the retrograde motion of one of Saturn's satellites, and other extrusive natural phenomena. It is difficult to understand an increasing number of divorces accompanied by an abnormal number of illegitimate births when the theory would seem to indicate that as divorce increases illegitimacy declines. In the United States, for example, where divorce is most practised, to be of illegitimate birth is a more painful social stigma than to be a thief. This moral fact is in perfect harmony with our theory of capitalization.

ideas have been plunged. Our method has been simple enough. All we have done is to look at moral phenomena in the light of wealth and its diffusion. But there is still another order of moral facts upon which we have not touched. These still seem to elude the method.

What shall we say of those moral notions of men concerning religious conduct? Religious conduct is no less a matter of morals than is conduct concerning life and property. Some men deem it highly wrong to disbelieve in certain theological creeds. It is positively iniquitous, according to many, to deny the truth of certain dogmas of religious faith. Men are severely punished, socially, if not legally, when they speak with contempt of popular gods, or when they refuse to conform with popular religious customs. Here, too, we find a great want of regularity in the phenomena. That which is right in a religious way in New York is wrong in Constantinople. What is virtuous in Rome is vicious in St. Petersburg; what is admirable in Pekin or Calcutta is abominable in London and Paris. Again, different individuals and different classes in the same community, are at war in their moral opinions concerning religious conduct itself.

We have seen that religious beliefs have no bearing on moral opinions concerning life and property. Let us inquire if the reverse of this fact be the truth. Let us ask whether moral opinions in the matter of life and wealth have any effect upon theological theory and practice. We can best accomplish this purpose by looking at a few moral facts which have a theological significance.

The example most readily suggesting itself is that

found in beliefs concerning the earth and the heavenly bodies. The human race at all times has entertained the most fanciful, and the most fallacious, notions about the earth and the stars. Such notions have been almost always of a religious nature. Men have always believed that their gods have had something to do with the creation and operation of the universe. All religions teach dogmas of this kind, and even religions professing no god of any kind have their own theories of creation. There is no exception to this rule.

Not long ago it was the general belief in Europe that the earth was flat, and that it was formed in six days, and that it was the centre of the visible stellar system. Theologians interpreted the sacred books of the Jews after this fashion. They believed also that this planet was only a few thousand years old. They believed that all species of animals, man included, were created in their present anatomical forms.

To deny the truth of this interpretation of the religious writings of the Jews was deemed a highly immoral act. It was immoral to teach that the earth was round or that the sun was fixed. The Bible had asserted that the earth had "foundations," and that Joshua had bidden the sun stand still over a certain valley in Syria. It was immoral to assert that these religious dogmas were false. Men were severely punished and often put to death for publishing opinions contrary to the popular theological belief upon these astronomical matters. Nor can we say that the peoples of Europe were unique in this respect. The religions of every civilized people, ancient and

modern, have their own interpretations of the universe, and to go contrary to accepted and general views has always been deemed immoral by popular and ecclesiastical judgment. The Jews, the Assyrians, the Egyptians, the Parsees, the Greeks, the Romans, the Hindoos, and the so-called Indo-Germanic peoples, all have their own cosmogony, and that cosmogony has always been an essential part of the religion of the masses. To express disbelief in any dogma of the religion was to attack the truth of the religion itself, and was hence wrong-doing. For the sake of convenience let us confine ourselves to the religion of Europe, for it is with that religion and its development we are most familiar.

A few centuries ago it was deemed perfectly right to kill the man who openly taught that the popular belief about the age and shape of the earth was untrue. To-day every educated European knows that this planet is not the centre of the solar system, and that it was not formed in a few hours; and this astronomical doctrine is taught in every European school. It is no longer an immoral act to assert the truth of that doctrine, in spite of the fact that some individuals yet adhere to the old interpretation of the Bible. It is no longer heresy to hold that the earth is several millions of years old instead of six thousand. It is no longer vicious or immoral openly to teach that truth. Why?

The answer is very simple. The religio-moral code of Europe has been changed in this particular matter. The religion of Europe no longer asserts that the earth is flat and that the sun moves around it. In other words, popular belief concerning astronomi-

cal phenomena, and their relations to the deity, has been profoundly altered. If we ask, in turn, for the cause of this important change in religious belief, we need not go far to find it. The change has been wrought by the invention of new kinds of wealth, and by the application of that wealth to purposes of general education. The wealth of Europe has multiplied in kind and in quantity. Its use has been progressively extended to larger and larger numbers of individuals. The truths which Kepler announced and which Newton proved; the truths discovered by the telescopes of Galilei and his successors; the truths developed by the entire assemblage of astronomical instruments since the time of these men, have been freely disseminated by the diffusion of wealth among the masses; and if we suppose that Europe had remained until now in its feudal state, we cannot imagine that the people of Europe would be much more enlightened to-day than they were in the time of Copernicus, whose theory of the solar system was universally condemned as heretical and immoral.

Long before Copernicus lived, there had been many a scientific heretic like him; and long before the time of Martin Luther there was many a theological heretic more radical than he. But the names of such men are not generally known because they lived at a time when their ideas could not become *social*. The circumstances of wealth in Europe had not yet reduced the minds of the people to an average intelligence capable of perceiving the force of the truth of the heretical doctrines taught. Whether the heresy was intellectual or moral made little difference. The calculations of a Leverrier cannot be understood by

men whose capacity for mathematics is the result of study carried no farther than an elementary arithmetic. The truth of Newton's law will not be perfectly clear to those who cannot understand calculus; and those who know nothing of geology may be at a loss to perceive the scientific impossibility of the doctrine that the earth was formed in a few days, and that it is only six thousand years old.

On the other hand, the moral wisdom of the parable of the Master's Vineyard will be somewhat obscure to those who think it wrong to pay equal wages to unequal workmen. Those who remember the parable will recall that the master of the vineyard made no distinction between the man who had labored one hour and the man who had labored eleven hours. All the laborers were paid the same wages regardless of their hours of toil. This apparently unjust rewarding of labor was approved by Jesus. The wealth of the master was his to dispose of as he saw fit. But the wisdom of that approval is not clearly perceived by capitalists or laborers. In the present system of production the general application of this method would prove the ruin of industry. For those who contend that competition is right, the plan of wages suggested by Jesus in this parable is immoral and infamous. It is not only unjust, but cruelly so. It removes every incentive to thrift and to industriousness. It strikes at the very foundation of the competitive system, and seems to place a premium on sloth.

But did Jesus contemplate doing all this? Hardly. The moral lesson of the parable is perfectly clear, perfectly wise, perfectly just to the minds of those who contend that the competitive system is the

essence of wrong. For these, the parable has a moral value of the highest order. For these, it contemplates a reconstruction of the entire system of economic life. For these it is an admirable and scientific perception of the total injustice of competition; and for these it is only an evidence of the profound wisdom of the mind which made it. Why do many men now so much more clearly perceive the truth of this seemingly obscure lesson in economics? Is it not because they have true conceptions of morality as it affects wealth and its division? And are not these clearer perceptions due altogether to the growing equality of men in the matter of wealth itself? If men are more intellectual to-day than formerly, it is because their wealth is greater and more equally diffused.

The mere repetition of a scientific truth or a moral precept is altogether insufficient for a general understanding of the one or a general practice of the other. The "golden rule" had been preached for centuries in Europe, yet that preaching had been in vain. It may be said that it is not practised now more than it ever was. This is an error. That precept is very largely practised in some of the relations of European life, and in these same relations it is absolutely practised in the United States. A few centuries ago Europeans and Americans were burning one another for heresy while they were incessantly preaching, "Do unto others as you would have others do unto you." The repetition of the precept did not prevent those who uttered it from slaying their fellow-men in the name of the precept's author. But to-day men do not slay others for heresy. They have learned

that religious liberty for each can best be served by equal liberty for all. He who would not be slain must perforce spare others. When men perceive that if they are to indulge their own religious emotions they must allow to others the same privilege, they forthwith begin the practice of the "golden rule," at least in the matter of religious toleration. And this whether they preach it or not. In America the practice is perfect; for Americans levy no taxes for religious purposes, and exempt from taxation all forms of wealth used in religious worship.

That flawless theorem of moral science known as the parable of the Master's Vineyard does not seem as clear as the "golden rule," when this latter precept is applied to religious toleration. But we cannot escape from the conclusion that, in their moral aspects, religious equality and economic equality are essentially the same. This view is held by the Christian socialists. They, manifestly, can see perfect justice in the economic parables of Jesus, and can understand also the universal wisdom of the "golden rule," as well as its wisdom when it is applied to religious liberty. If the majority of Christians do not now see this moral force of the parable, they *do* see the force of the "golden rule" in its application to freedom of worship. Let somebody propose to destroy that freedom, and he will soon see how quickly the majority of Christians will manifest a thorough appreciation of the force of the command of the Saviour. Nor is it difficult to conceive that men are as capable of perceiving the economic force of the parable of the vineyard. What Jesus desired to teach by that parable has not always been pre-

cisely understood by preachers of the gospel. Their explanations of it have been somewhat lame, if no worse. Jesus certainly did not intend to point out a commonplace fact. We all know that a man can give away his wealth to suit himself. But Jesus went out of his way to approve the special manner in which the master paid his employees. Why should he have done this if that method did not commend itself to his moral theory of labor and capital?

We will presently recur to this subject and examine more fully into the nature of Christian ethics. We hope to be able to show that of all moral teachers Jesus alone has left a perfectly scientific system; that he alone has understood the true method of dealing with moral facts; that he alone saw with unclouded vision the absolute and necessary harmony underlying the profoundly irregular manifestations of moral force; and that it was he who, by some power of synthesis, which has eluded ancient and modern thinkers alike, was able to construct a theory of moral life in perfect accord with the general principles of modern scientific inquiry. This we shall undertake to do with every assurance that our position will commend itself to those who are seeking a substantial basis on which to build an exact science of ethics. For the present, let us revert to the discussion of the effects wrought upon religious conduct by the economic forces of civilization.

The first of these effects is the complete severance of religious morality from economic morality. No consideration of religious belief enters into the judgment passed upon the economic conduct of men. An individual's moral character in no wise depends

upon his religious convictions. The individual may have religious belief of any kind, or no religious faith at all. The fact that a thief is a monotheist or an atheist does not excuse him or convict him. He is condemned without the slightest regard to his theological beliefs. He is not asked whether he is a Christian or a pagan. Moral judgment upon his conduct is rendered without even an inquiry into his religious state of mind. On the other hand, the conduct of the philanthropist is not judged by the standards of creed. He may adhere to one creed or another; he may adhere to no creed at all. But this fact does not enter into the moral judgment which pronounces him to be a man of singularly high character. There is no special religious belief regarded by everybody as an essential qualification of good conduct.

Nor can there ever be. Religious toleration is a growing idea. It expands in quantity and in kind with the expansion of intelligence and sympathy. The most moral, as well as the most intelligent, men are now so far from condemning others because of religious convictions that the practice of extreme consideration and solicitude for the faith of one's neighbors is regarded as one of the most admirable of virtues. The good man is he who, while demanding that his own internal faith be respected, is ready to give as much as he asks. If his sensibilities are hurt by want of respect for his religious faith, he does not invite attack by attacking the faiths of others. Every man is open to the conviction that he may be in error; but conviction cannot be produced by depriving the individual of the very liberty essential to the change of mind desired. Amity in religion is

therefore rapidly displacing enmity ; and when amity is found to be the more efficient means of propagating religious faith of any kind, it becomes rapidly and permanently social. The world's great religious debates are now conducted with a spirit of freedom and fairness impossible so long as the teachers of heresy were publicly burned or banished by governments. The death of the "sinner" is not so much desired at present as it was in the old days of comparative poverty and comparative ignorance. Wealth, which educates the mind, improves the moral character likewise. The man who has property that may be stolen abhors the thief. He who would be free to convert others to his own religious faith can secure his freedom only when he gives to others the same liberty he asks for himself. And if this amicable state exists in civilized communities to-day, it is only because men have become intelligent and moral by the use of expanding wealth.

Thus is established that complete severance of religion from morality which leaves men free to choose their creeds as long as these creeds do not interfere with life and property. In other words, all are free to practise *moral* religion. But the morality of religion is not defined by religious opinion, but by economic and political opinion. And so we are brought to the conclusion that while religious codes have no influence upon moral codes affecting wealth and life, these latter codes have every influence upon religious theory and conduct.

Upon a review of the facts dwelt upon in this chapter, we are moved to the conviction that moral phenomena form no exception to the law of harmoni-

ous sequence assumed to underlie the phenomena of existence at large. One after another the apparent contradictions in the life of man are seen to disappear when we apply to them the touchstone of wealth and the concepts it connotes. Is it reasonable to assume that by the use of this method we can construct an exact moral science? By its use can we lay down laws of conduct which shall have an universal application — laws by which we can arrive at perfect judgments of moral values, and positively determine how far conduct may be correctly adjudged to be right or wrong?

We are convinced that all who have understood our theory of capitalization will answer the question in the affirmative. A perfect moral science should be able to predict the conduct of men from day to day and from hour to hour. Given the circumstances, and it should be capable of foretelling precisely how the body social will act. This is done in the physical sciences. Place in the hands of the mathematician the mass and distance of bodies in space, and he is able to calculate the speed and direction of their motion. The chemist knows how certain elements will combine when brought together under certain conditions. The physiologist can predict the conduct of the bodily organs when he is told the nature of the circumstances applied to them. Is this, in a measure, true of the moral actions of men? There need be no doubt of it.

There is no uncertainty how Americans would act were an attempt made to tax the people for the support of a state church, to create an order of nobility, to reëstablish chattel slavery by act of Congress, to permit private coinage, to replace representative

government with an absolute monarchy, or to abolish public education. Moral science, such as we have now, although not known by that name, can foretell the result of any such attempt with as nice precision as the astronomer can predict the transit of a planet across the face of the sun. Why? Because in the American republic there is perfect equality for all the people in the institutions proposed for abolition.

An attempt to overthrow any of these institutions would arouse every individual to prompt and decisive action. As all are perfectly equal in the privileges proposed for abrogation, all would be stimulated alike. Every individual would think and act like every other of his fellows. Equal stimuli would produce equal action in all. All would agree that the proposed reforms would be wrong. Moral opinion would be continuous and homogeneous throughout the entire assemblage of the popular mind. This is true because the political and religious liberty of the people is very nearly ideal.

Why is it that we cannot make similarly accurate predictions about the conduct of the people in matters economic? Why cannot we foretell the result of an election the issue of which is concerned with the currency or with free trade? Simply because the state of the American people is far from that economic ideal of society in which all are perfectly equal in wealth. If, in dealing with economic questions of right and wrong, we replace the present state with a conception of a state of perfect equality, we will find that prediction becomes easy and sure; quite as easy as prediction dealing with purely political reforms. When the mathematician sets to work to solve a problem

he uses ideal instruments of thought. The geometer uses only ideally perfect lines, volumes, and surfaces. The pathologist uses ideally perfect organs with which he compares diseased ones. He has before him as his standard a perfect man. He can have no other and be sure of his science.

The same is true of the moral scientist. The standard by which he judges all human conduct must be an ideal one; and when we look into the moral precepts of Jesus, with this fact in mind, almost every one of his maxims becomes luminous and clear. Almost all of the economic precepts of Jesus imply an ideal state of equality in wealth. Take from Jesus this perfect standard of equality, and his precepts become obscure or meaningless. Give it to him, and his ethics is scientific in the highest degree. In a society where every individual would be the economic equal of all the others, the economic precepts of Jesus would act of their own force. In a society with a competitive system those precepts seem inconceivable and vicious.

How can we conceive of a man practising the "golden rule" while he remains a thief? How can we conceive of a capitalist paying equal wages to unequal workmen when such wages would mean the death of industry? But if we supply these conceptions with that of a perfectly equilibrated social body, we cannot conceive of a man who would *not* be the very exemplar of the precepts and parables of the redeemer. Many of the moral theorems of Jesus are as purely scientific as any proposition of Euclid. Some few of his theorems we cannot perceive *so* clearly; but we are justified in withholding judgment as to the

scientific value of the now cloudy theorems when many which were cloudy before are now clear enough.

The attitude of scientific men toward the ethics of the great moral prophet is strangely inconsistent with their avowed method. Let us suppose that Euclid had left a proposition of which there remained preserved but half the proof. Would it be scientific or otherwise to reject the possibility of its proof because the whole proof was not at once apparent? Would not mathematicians devote hours and years to the attempt to carry out the reasoning of the theorem? Yet such men as have tried to construct a science of morals have paid no attention to the moral theorems of Jesus. Some of these precepts are now perfectly clear—such as that implied in the parable of the vineyard and the “golden rule.” But if one or two or several of his theorems are now seen to be perfectly lucid and perfectly true, why reject all the others as being scientifically impossible? Why say that the sermon on the mount is a *satire* when the “golden rule” is practised of its own force in the United States?

To give your cloak when sued at law for your coat; to love your neighbor as you love yourself; to turn the other cheek when smitten upon the one; these things now seem as scientifically impossible as did the “golden rule” to the moralist of the Middle Ages. That moralist could not understand the economic principle of the “golden rule” when it was applied to religious liberty. But Americans need no exegetist to point it out to them. It acts of its own force. We do not clearly perceive the principle involved in turn-

ing the other cheek; but in view of what we have seen of the "golden rule," would it not be wise to defer judgment for a time?

"The Father which is in Heaven" may seem to some to be the pure delusion of a moral fanatic. Is it wise to dispose of it in this manner when we consider the other maxims of Jesus? Is it not prudent to wait, lest perchance it should turn out that under cover of Oriental imagery may be found a luminous and noble axiom of moral truth? He who two thousand years ago could conceive of a social state in which the "golden rule" would be mechanically necessary at least deserves some especial consideration at the hands of moral science. We do not say this in irony. We say it as sober fact. And that moralist who could illustrate his principle with such perfect and detailed examples as the Master's Vineyard, the Lost Sheep, and the Prodigal Son, was a thinker in economics who, if he did not discuss Free Trade, at least was aware of the principle of socialized production and its effect upon the moral ideas of men.

To say that some of the maxims of Jesus were taught by other ancient moralists does not prove that Jesus was a fanatic. It proves the reverse. It proves that other great minds had conceptions somewhat similar. We do not discredit Copernicus or Kepler because the Pythagoreans taught that the planets revolved around the sun. Nor do we discredit Copernicus because Francis Bacon, and other eminent philosophers of his time, rejected the Copernican theory as being disproved by the daily evidence of the senses. All we can say is that, in the light of our larger knowledge, Copernicus was right. And

those who to-day reject the Christian ethics because the experience of men is in daily conflict with some of its applications, may possibly occupy a position similar to that of Francis Bacon and his friends. Men do not now practise turning the other cheek ; but the practice of forgiving an enemy is approved by growing numbers ; and if we conceive of a social state in which most men perceive that enmity to another is enmity to self, we can conceive of men who will pity rather than punish the individual who is unjust.

In this light we can readily conceive how men could voluntarily do good to those who hate them, return good for evil, forgive an enemy, love their neighbor as themselves, and commiserate the thief as we now commiserate the insane ; for the man who would steal when theft was self-punishment would be insane indeed.

So, when we subject the maxims of Jesus to the test of true science, we find that all of them but one or two are perfectly lucid and theoretically true. Is it possible that the others are mere delusion ? The geometer who would insist upon using material lines and volumes could never prove a theorem of geometry. But no geometer uses this method. If Adams had used it, he could never have told the Astronomer Royal where to look for Neptune. If pathologists had studied none but diseased organs, all hope of diagnosis had been vain. And if the moralist will exclude from his logic the conception of a society in which all men are equal, and hence free, he can never hope to establish a science of morals which can predict the conduct of men from hour to hour.

If we assume that moral conduct will be regular

when equal stimuli produce equal effects upon all, we can judge of present morality as being near or remote from perfection. But that proximity or remoteness will be precisely known when we know the proximity of a society to the equilibrium at which all men are equal. Thus we can weigh the kinetic state of society against the equilibrated state, as we can measure the distance between any point in a stream and the level of the sea. As the current broadens and deepens and the speed increases, we know that the level is nearer. We know what the level will be like, because we have observed it in other streams. And as in this onward flow of social force the moral level can be reached no sooner or later than the economic level, we know in advance what moral facts are forthcoming. And knowing these, our moral science can be made as perfect as any other science used now by men.

It would be strange indeed if harmony should be found in all the facts of nature except the facts which concern the moral sense of men. We can be assured that these facts are no exception to the law. Harmony is there, as elsewhere. We are convinced that the law of capital, diffusion, and population we have developed in the preceding six chapters will show how that harmony can be understood. We have endeavored to show it in the present chapter. But we must not take leave of this part of our discussion without pointing out that the other social sciences will be more clearly understood if we apply to them the same logic we have applied to ethics. Economic science will better understand the "normal" state to which economic forces "tend," when it understands that the normal state is ever shifting forward toward the equi-

librium in which economic stimuli produce the same effect on all the individuals of a society. Political science will be better able to generalize its laws so that they will include the true relations of government to capital, and the relations of moral and economic forces to political forces. The three sciences of ethics, of economics, and of government will find that the conceptions of one are inseparable from the conceptions of the others, and that, at root, they are the same. This root will be found in psychology, and the root of psychology in the basic forces and functions of life.

It will be found, moreover, that social science must be universal. Its broadest generalization will include all forms of social life, whether they be human or otherwise. Social science differentiates as the facts differentiate. All political groups of like kind will be found to act according to one law. But as we ascend in the scale of psychic life, political groups present new facts to be generalized. Some groups sustain life by altering the environment in quality and in quantity more than other groups. Of the former, some live in fixed localities, and out of the natural environment arises wealth which is used to create new wealth. In these groups government is found coexisting with capital. Wherever the two are found together, one general relation is observed everywhere to prevail between them. This relation is found to lie in the quantity and diffusion of the wealth created. As the quantity and diffusion are great, the group is found to be politically, economically, and morally socialized. As the quantity and diffusion are small, the group is found to be individualized in these three

aspects. But the process of socialization is always found to equalize the distribution, while it increases the quantity, of wealth.

In human groups this socialization of capital is carried on and made necessary by the nature of the capital used. Money is the most desirable part of human capital because it can be converted into all forms of wealth. Government was hence forced to assume complete control of the manufacture of money as soon as the thing used for money was of a kind susceptible of government manufacture. The self-interest of all demands that no individual shall in any manner manufacture public money. He does not manufacture private money of *intrinsic* value because he can gain no economic good by the process. The best interests of all are served by public manufacture. Any man at any time may possess money. Most men always possess and use it. The individual who has least money, or none at all, desires that all money shall be of one kind, and shall be protected by the total power of the group. And so does the individual who has a little money, or the most.

Out of money arises other forms of capital known as commercial paper. Of these the stock-share is the most useful form. This form has forced a more complex system of production and capitalization. Next to money the most highly desirable form of capital is the stock-share. But, unlike money, the stock-share is not intrinsically of value. It is only valuable as a symbol of creative capital. Uniformity of value in stock-shares cannot be secured by public manufacture. Protection of the value of a stock-share is as desirable as the protection of money.

Any man may at any time acquire this form of capital. All seek it because it is the most desirable form of wealth next to money. If its value is to be guaranteed at all, it must be guaranteed by the total power of the political group.

But that power cannot be exercised over the stock-share itself. It must, therefore, be exerted over the one thing of intrinsic value which the stock-share represents. That thing is creative capital. But there can be no social control over capital used for production of wealth the value of which depends upon its individual character. Social control of capital, therefore, must be limited to capital which produces wealth bearing no individual stamp upon it. But this kind of capital is the only kind which uses the stock-share as its symbolic instrument. Individuals, whether they own symbolic instruments or not, all desire that the value of these instruments shall be uniform, for this symbol represents the value of the real capital as measured in the terms of product. If its price-value be larger than its real value, those who acquire it pay more for it than it is worth; and this uniformity of the value at which it is sold with its real value, is as desirable as the same uniformity in money.

Uniformity of this kind can never be secured as long as the stock-share and the capital it represents remain in private hands; for stock-shares, like money, can be debased by those who control them and the capital of which they are symbols. But individuals cannot personally secure the honesty of stock-shares by personally attending to production, any more than they can attend to the manufacture of money. The power of the group must thence be used through the

political instrument of the group, as it is used in the production of money. That instrument is the mechanism of government created by the majority of the group itself.

The socialization of capital made necessary by these economic, moral, and political forces, issues in motion toward the equilibrium, or the economic final purpose, of all political groups in which capital exists.

The purpose of an individual organism is to live as amply as may be. The purpose of a group is so to live that individuals shall live amply. It is not that one or many shall have ample life, but that *all* shall have it. The amplest existence for all is best served by a limited existence for each. And the amplest life for all is found only when the amplitude of the life of each is equal to that of all others. The purpose of the group is secured, therefore, only when *equal amplitude of life exists for all its members*. This state is now observed in groups of hive-bees. The only observable purpose of a group of bees is the very process through which it is observed to pass. We can say no more of a group of men. But human society is nowhere in equilibrium. It is moving toward that equilibrium and the only conceivable purpose of its motion is the equilibrated state itself.

In the higher forms of political groups among men, the process going on is everywhere the same. Productive power increases, wealth multiplies in quantity and diffusion, and intelligence spreads to larger numbers. Increased exercise of the brain checks population. The resulting intelligence multiplies the checks because intelligent persons are selected for propagation. The process stops when, other things being

equal, intelligence ceases to be of value in the selection of the mate. It so ceases when all are intellectually alike in capacity, or nearly so. But as intelligence determines the fertility of men, fertility must be equal also, or nearly so. The number of births must be equal, or nearly so, from united pairs. But this number must be equal to the number of deaths, if longevity be uniform. And if longevity be uniform, the number of births per united pair must be two on the average.

The numerical proportions of the sexes will be controlled by the same forces which control them now; and these forces, as we have seen, produce equal numbers of males and females with men as with mammals of other kinds.

The final purpose, therefore, of the reproductive motion of society is the establishment of a reproductive equilibrium, which shall be the product of the same forces as those we have conceived to be productive of the economic equilibrium. The purpose is not single but twofold, and this conclusion at which we have arrived by induction can be arrived at by deduction also. For the force which moves all living things to action is a compound and not a simple force. The nutrition of the individual and the propagation of the race may be said to be one process — that of growth. But if we conceive of the function of assimilation as being one aspect of growth, and that of propagation as being another, we can conceive of vital growth as being twofold in its character. The motive of social motion being compound, the level at which social motion, flowing in a right line, must stop must be conceived to be compound also. And

the character of the twofold stable equilibrium we have deduced is found to be a character into which no forces are compounded save those which make up the most conspicuous fact in human observation. More than this—the compound character of the equilibrium is precisely the product of the compound character of the force.

Let us carry our conclusions to the furthestmost. If we conceive of human society of the future as being divided into separate groups, we must conceive of these groups as being all alike. When a group splits up into two, the social propagation thus effected will be precisely similar to the social propagation of hive-bees or the propagation of a simple cell. Each new society will pass through that recapitulative or abridging process which shall be a repetition, in a short time, of the entire process through which society has passed during all the ages. This fundamental law of life, observed in vital organisms, is not now absent from social organisms, nor will it ever be. But the abridged process cannot be in advance of the secular one.

With society at large in equilibrium, no new forms can be developed by social groups. The only change conceivable must be one which will carry society backwards. We can conceive of no change in the solar system save one by which its present equilibrium will be reduced to a less stable form. When social forces shall have been once equilibrated, the only conceivable change will be from the stable to the less stable. But the condition of stability will be the supply of food. The question of the exhaustibility of the food supply is a geological question, and

the probability of exhaustion would seem to be inconceivably remote.

We have reserved for the last place in our discussion a force which is considered by many to be the most important factor in human history ; a motive held by many to be of prime value in the moulding of human destiny and in the development of social life. This force is religion itself. The existence of religious belief is an universal fact of human experience, and he who would minimize its importance is guilty of evasion for which there can be no palliation.

The question at once suggests itself : Does the theory of social forces advanced here account for the existence of the religions of men ? We meet the question fairly. It does not. We have not sought to inquire into the origin of religion. We have not considered the probability of the truth of any religious system. Our conclusions leave the entire question of theological faith untouched. So far as the principles developed in this work go, there is neither demonstration nor disproof of any scheme of theological belief. But it should be plain from our conclusions that the religion which will be practised by the human race of the future must be one which shall not be repugnant to moral ideas of equality. If we can conceive of a system of religion capable of demonstration by scientific methods, we shall conceive of a religion which shall be manifestly true. Humanity has happily passed the stage of its social evolution when to force outward acquiescence in religious forms is any longer conceivable.

If men are not to be coerced into religious belief by physical force, they must be drawn into it by

appeals to their reason and their sympathies. In a highly intelligent and wealthy social group that religion will be best fitted for survival which best commends itself to reason, while at the same time it awakens the sympathies of an intelligent, free, and moral humanity. It must not hope to escape the judgments of science, for science judges everything by measuring the probability of its truth with the broad and undeniable facts of experience. Nor should any moral religion fear the scrutiny of science, for science can do no more than demonstrate its truth or its error. As long as science cannot achieve either of these results, religion need not be perturbed. If a religion can be *proved* to be false, mankind will be better for the knowledge. If science has a method of demonstration which religion has not, it will best serve religious men, who are moral, to facilitate inquiry by the use of that method. No moral man wishes to believe error when truth is near. Once that he perceives the *possibility* of error, he is not satisfied until his doubt is removed. All considerations give way before this one; for his most pressing desire is to *know*, when knowledge is possible. Wisdom for him is happiness.

The material with which science deals consists of the facts of human experience. Analysis of the facts and a knowledge of the causes which produce them is the function of scientific inquiry. Science has thus indirectly disclosed error in religious beliefs. If men now no longer believe that the weather can be influenced by prayer, they are moved to abandon the belief by the fact that the causes of changes in temperature are known. There is no reason why

men should pray for rain any more than for perpetual spring or summer. If prayer can produce rain in an area of high barometer, prayer can also produce a perpetual season of sowing and reaping. Scientific inquiry has done much to remove beliefs of this irrational kind.

But one of the most conspicuous facts of human experience is the existence of religion itself. How are we to deal with it? If science deals with it at all, it must deal with it in one way only, and that way must be the same as that involved in the universal application of the scientific method. *The religion which does not fear the truth is the only moral religion.* If it be true, no quantity of scientific analysis can ever prove that it is not. If its dogmas transcend the method of science, that fact will be plain and forceful to the truly scientific mind. And the highest verdict of science upon that religion which transcends its method can only be "Unproved." If its truth does not transcend science, science can demonstrate it. If the dogmas of all living religions can be shown to be the product of natural causes, and at the same time to be only misconceptions of true facts, all living religions must pass away. Religious ideas are of two kinds — intellectual and moral. The first relate to the cause of the universe at large. The second relate to the conduct of men toward one another, and their conduct in relation to the assumed first cause. Men of the same belief as to the first cause may differ in their moral conduct in relation to that cause, while they are at one in their conduct toward one another. But as wealth tends to produce intellectual equality, it must tend likewise to elimi-

nate differences in religious opinions. The elimination may consist in changing the dogmas of *all* religions, or it may consist in drawing all men's minds into one form of dogmatism. In the light of the law of capitalization, what can we say of the religion of the future?

This ideal religion must possess several characters. Its dogmas must not be manifestly the misinterpretation of facts of known cause. The dogmas must be themselves beyond demonstration, yet in no wise contradictory to the known facts of experience. The body of its beliefs must be of a character which cannot be explained by merely natural growth of ideas in the minds of men. The precepts of this religion must be scientifically moral, and its ontological concepts intellectually rational. A religion such as this, whether it be now living or not, must be the religion of the future.

Our theory of capitalization seems to indicate that as men grow rich they grow intellectual and moral likewise; that the social state which they most desire is the very state toward which they are moving; and that this state is the one which is also found, in so far as can be seen, to be most moral, most intellectual, most happy, and most free. This is just what we should expect to find in the light of the theory itself. For if a man cannot conceive himself as being happy unless he conceives himself as remaining a *man*, he cannot conceive himself as being happy if he conceives himself as being alone. All his conceptions of happiness are therefore *social*. Whether they be conceptions of happiness here or hereafter, physical or spiritual, temporal or eternal,

they are essentially inseparable from ideas of association and companionship with men of his own kind. He cannot conceive of an earthly social state more happy than that toward which society is actually moving; and he cannot do so because society is moving toward that very state. What is beyond that state we do not know, because the only conceivable purpose of the only forces we see is that very state itself. If more than this can be known, it shall be formulated when a higher generalization of social motion is found, or when the nature of force itself is more clearly understood.



UNIVERSITY OF CALIFORNIA LIBRARY

Los Angeles

This book is DUE on the last date stamped below.

REC'D LD-1111

LD
LIB

NOV 24 '76
NOV 10, 1976

UC SOUTHERN REGIONAL LIBRARY FACILITY



A 000 532 719 2

HM
101
L242ℓ

